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ABSTRACT

Materials contained in this curriculum guide are designed for use in carrying out the World of Related Knowledge and Educational Development (WORK-ED) program goal of enabling ninth grade students not enrolled in traditional college prep courses to make career choices based on occupational information. The guide is divided into two major components; communications and career clusters. The communications area, emphasizing skill proficiency in those skills necessary to survive and succeed in the world of work, require students to spend one quarter of the school year covering all aspects of communications with emphasis on human values, reading, oral skills, and writing skills for practical communications. The guide's second component, career clusters, provides occupational information for the following eight career clusters and is designed to be taught by industrial arts and classroom teachers in cycles of twenty-two days: Agriculture or Environmental Science, Business, Career Guidance, Carpentry, Drafting, Graphic Arts, Health Careers, and Home Economics. The format for the communications component includes an introduction, course objectives, activities, resources, bibliography, and student material for duplication including evaluation instruments. The format for the Career Clusters component includes an introduction, course objectives, activities, careers in cluster, glossary of terms, resources, bibliography, and student material for duplication. (TA)

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Hackettstown High School
Warren Street
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WORK-ED

(WORLD OF RELATED KNOWLEDGE AND EDUCATIONAL DEVELOPMENT)

A Curriculum Manual for Teachers

Developed and Prepared by
(Project WORK-ED Staff)

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COMMISSIONER'S ENDORSEMENT

By providing ninth grade students with basic skills in communication and with exposure to many career clusters, Project WORK-ED has made a significant contribution to the education of high school students as they make critical choices for their future careers. On behalf of the Department of Education, State of New Jersey, I therefore commend it to educators, parents and students throughout the nation.

Fred G. Burke

Fred G. Burke
Commissioner of Education
State of New Jersey

WORK-ED was developed through the cooperative efforts of the Project staff, and the staff of the Office of Program Development, Division of Research, Planning, and Evaluation, Field Services, the Department of Education, State of New Jersey. The curriculum materials were developed between 1974 and 1976 with funding from the Elementary and Secondary Education Act, Title III.

In September the WORK-ED program was validated as successful, cost-effective, and exportable by the standards and guidelines of the United States Office of Education. As a result the program is now funded through ESEA Title III, as a demonstration site to provide dissemination materials and services to interested educators.

The WORK-ED staff is especially grateful for the guidance, support, and editing of this manual by Dr. Lillian White Stevens of the State Department of New Jersey.

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TECHNICAL ASSISTANCE

William F. Cashill, Administrative Assistant
Mary Gail Menzel, School Psychologist
Robert H. Irsay, Photography
Edward W. Price, Graphic Artist

DEDICATION

This manual is dedicated to those individuals caught between the simplicity of childhood and the complexity of the adult world; that their transition from the yellow brick road to the labyrinth of the world of work may be accomplished smoothly.

V. Fraleigh
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"American schools are producing too many youngsters who qualify neither for a job nor for college. Many high school graduates go on to college only because they haven't the vaguest idea of what else to do."

Dr. Sidney Marland
(Former Commissioner of Education)

"Youths throughout the country must be given the opportunity to learn about the jobs available in our society and must be given professional help in choosing their occupations and in finding the best training available. Otherwise, I believe that we will continue to have an enormous waste of human talent which we can ill afford. . . . If the concept of career education has any validity -- and I believe it does, it ought to be adopted as part of the regular curriculum by school districts."

Carl Perkins
Dem.-Kentucky
Congress of the United States

The following soliloquy, by an unknown author,
articulates the rationale for this program in particular and for career education in general.

THE POOR SCHOLAR'S SOLILOQUY

No, I'm not very good in school. This is my second year in the seventh grade, and I'm bigger and taller than the other kids. They like me all right, though, even if I don't say much in the classroom, because outside I can tell them how to do a lot of things. They tag me around and that sort of makes up for what goes on in school.

I don't know why the teachers don't like me. They never have very much. Seems like they don't think you know anything unless you can name the book it comes out of. I have a lot of books in my room at home – books like Popular Science, Mechanical Encyclopedia, and the Sears and Ward's catalogues – but I don't very often sit down and read them through like they make us do in school. I use my books when I want to find something out like whenever Mom buys something second hand I look it up in Sears' and Ward's first and tell her if she's getting stung or not. I can use the index in a hurry.

In school, though, we've got to learn whatever is in the book and I just can't memorize the stuff. Last year I stayed after school every night for two weeks trying to learn the names of the Presidents. Of course, I knew some of them like Washington, and Jefferson, and Lincoln, but there must have been thirty altogether, and I never did get them straight.

I'm not too sorry though, because the kids who learned the Presidents had to turn right around and learn all the Vice Presidents. I am taking seventh grade over, but our teacher this year isn't so interested in the names of Presidents. She has us trying to learn the names of all the great American Inventors.

I guess I just can't remember names in history. Anyway, this year I've been trying to learn about trucks because my uncle owns three and he says I can drive one when I'm sixteen. I already know the horsepower and number of forward and backward speeds of twenty-six American trucks, some of them Diesels, and I can spot each make a long way off. It's funny how the Diesel works. I started to tell my teacher about it last Wednesday in science class when the pump we were using to make a vacuum in a bell jar got hot, but she didn't see what a Diesel engine had to do with our experiment on air pressure so I just kept still. The kids seemed interested though. I took four of them around to my uncle's garage after school and we saw the mechanic, Gus, tear a big Diesel truck down. Boy, does he know his stuff!

I'm not good in geography either. They call it economic geography this year. We've been studying the imports and exports of Chile all week, but I couldn't tell you what they are. Maybe the reason is I had to miss school yesterday because my uncle took me and his big trailer truck down state about 200 miles, and we brought almost 10 ton of stock to the Chicago market.

He had told me where we were going, and I had to figure out the highways to take and also the mileage. We didn't do anything but drive and turn where I told him to turn south or southwest or some other direction. We made seven stops and drove over 500 miles round trip. I'm figuring now what his oil cost, and also the wear and tear of the truck, (he calls it depreciation), so we'll know how much we made.

I even write out all the bills and send letters to the farmers about what their pigs and beef cattle brought at the stockyards. I only made three mistakes in 17 letters last time, my aunt said, . . . all commas. She's been through high school and reads them over. I wish I could write school themes that way. The last one I had to write was on "What a Daffodil Thinks of Spring," and I just couldn't get going.

I don't do very well in school arithmetic either. Seems I just can't keep my mind on the problems. We had one the other day like this:

> "If a 57 foot telephone pole falls across a cement highway so that 17-3/5 feet extend from one side and 14-9/17 feet from the other, how wide is the highway?"

That seemed to me like an awfully silly way to get the width of a highway. I didn't even try to answer it because it didn't say whether the pole had fallen straight across or not.

Even in shop I don't get very good grades. All of us kids made a broom holder and a book end this term and mine were sloppy. I just couldn't get interested. Mom doesn't use a broom anymore with her new vacuum cleaner, and all our books are in a bookcase with glass doors in the parlor. Anyway, I wanted to make an end gate for my uncle's trailer, but the shop teacher said that meant using metal and wood both, and I'd have to work with wood first. I didn't see why but I kept still and made a tie rack at school and the tail gate after school at my uncle's garage. He said I saved him ten dollars.

Civics is hard for me, too! I've been staying after school trying to learn the "Articles of Confederation" for almost a week, because the teacher said we couldn't be good citizens unless we did. I really tried, because I want to be a good citizen. I did hate to stay after school, though, because a bunch of us boys from the South end of town have been cleaning up the old lot across from Taylor's Machine Shop to make a playground out of it for the little kids from the Methodist Home. I made a jungle gym from old pipe, and the guys made me Grand Mogul to keep the playground going.

Dad says I can quit school when I'm sixteen, and I'm sort of anxious to because there are a lot of things I want to learn to do, and as my uncle says, I'm not getting any younger.

(Author Unknown)

FOREWORD

Career Education is a form of education proposed by the United States Office of Education. It involves a redirection of educational experiences – curriculum, instruction, and counseling – for the purpose of preparation for economic independence, personal fulfillment, and an appreciation of the dignity of work.

Although Career Education was proposed on a national level; there was also an immediate need for this redirection on a local level in Hackettstown, N.J.

Within the last 10 years the town of Hackettstown has gone through a transition from a rural community to that of a suburban community. The population has grown by 25%; industrial and business activity has increased dramatically; new major highways have facilitated travel to urban areas as well as major resort areas. Because of these factors, local students could no longer be complacent about their future career on local farms, where sophisticated techniques and devices were replacing the hired hand, or at a local factory where skilled individuals were replacing the unskilled. Future career choices were becoming more complex, more numerous and more competitive. Prospects for remaining in the geographic area and finding gainful and satisfying employment depended upon the student's meeting the requirements for these skilled and diversified positions. Before he could choose or prepare for any of these future careers, he must first be made aware of the available choices. The curriculum had to be expanded to include information of existing careers and the necessary education and training required to enter these careers.

The ninth grade curriculum was expanded and Project WORK-ED was included as a Career education course of study. It was designed: to make students aware of the many careers available; to enable them to evaluate their own interests and abilities with respect to future goals: and to qualify them to make appropriate choices among high school courses in preparation for their Careers.

Introduced into the curriculum of Hackettstown High School in September of 1974 as *Communications and Careers*, with funds provided by the Elementary and Secondary Education Act, Title III-IV-C, the program was developed with a pilot group of 100 students, most of whom had experienced academic, behavioral and attendance problems in elementary school. The rationale for the target population was that success with this group would insure success with all ninth graders. One year later, in September 1975, project WORK-ED was validated as innovative, successful, cost effective and exportable according to the standard and guidelines of the U.S. Office of Education.

The ninth grade program is an outgrowth of an on-going program for eleventh and twelfth grade students started in 1972 with 300 students. Here, the classroom is extended into the world of work: the students select career areas of interest, observe, and participate in their chosen field, and work with a cooperating professional in the community, who, together with the student, evaluates the student's performance. Thus the student secures a hands-on-experience in a potential career field before embarking upon post high school studies or chosen occupations.

Although this program was successful, the educators and professionals most involved with the 300 students in the pilot group at Hackettstown High School for two years realized that something else was needed: although the students' experiences in the program were positive, additional preparation for Careers was needed. The ninth grade program arose from the recognition of this need for earlier preparation. The students who have experienced the 9th grade program will be better equipped than their predesessors to make choices if they select to take part in the upper class program. The ninth grade program satisfies the need for a broader knowledge of existing Careers and earlier decision making.

In its brief period of attempting to help students answer their questions of "Who am I?", and "Where am I going?" the 9th grade program has effected positive reactions from the school administration, teachers, parents, and most importantly, the students themselves. Evaluation of the program indicates that students find high school more relevant as indicated by: less disruptive behavior; decreased drop-out rate; decrease in vandalism; decreased truancy; and decreased absenteeism. In a written survey of all the students in the program, 97% indicated that they felt that the course was helpful and relevant to them; 94% stated that they would recommend it to a friend; 98% stated that their knowledge of careers had increased and 71% indicated that they had made tentative career selections as a direct result of the program. The students are now making deliberate choices in their 10th grade courses with a future goal in mind. They are deciding who they are and where they are going.

In addition to this WORK-ED Manual for teachers, a WORK-ED Administration Manual is available, detailing all of the factors necessary for implementing the Program in a district.

Introduction

The WORK-ED Program is a career-education course of study for 9th graders designed for the purpose of achieving the following goal: "Ninth grade students, who have not chosen the traditional college prep high school course, will make career choices based on occupational information and ability to select goals."

In order to achieve this goal the program is divided into two major components, an area of basic skills in *Communications* and an area of information and experience in *Career Clusters*.

The Communications area emphasizes *skill proficiency* in teaching communications skills necessary to survive and to succeed in the world of work. The students spend one marking period (one quarter of the year) with each of four English teachers to cover all aspects of communications with emphasis upon four: human values, reading, oral skills, and writing skills for practical communications. All four areas are covered in each unit but each unit emphasizes a particular area.

The 7 objectives of Communication are:

1. To develop in the student an awareness of his values, interests, aptitudes, abilities, and personality, and how they will pertain to his career choice.
2. To impart the essentials of traditional grammar and composition so that the student becomes a functional writer with acceptable usage.
3. To develop a sense of organization so that the student is able to plan and write paragraphs and reports, resumes, and job descriptions.
4. To impart the skills of research so that the student is able to locate information, paraphrase the material and organize it into an acceptable career paper.
5. To develop an awareness to the fact that reading and research can contribute to career success through investigation of alternatives of career choice, finding out about the obligations of individual and productive involvement in the total work force, determining the requisites of occupations and opportunities to prepare for gainful employment.
6. To develop oral skills so that the student may express himself articulately and enter into interview situations without fear and with a degree of assurance.
7. To develop listening skills through the extensive use of the community and whole school as a learning laboratory and the classroom as a podium for the resource process.

The second component of the course stresses *exposure* to eight separate Career Clusters taught by industrial arts and classroom teachers whose purpose is to make students aware of the varied careers available to them in each area. The more exposure the student experiences, the wider his career choices will be. In small groups to encourage individualization, the 9th graders are cycled through eight Career Clusters for 22 school days each: Agriculture or Environmental Science, Business, Career Guidance, Carpentry, Drafting, Graphic Arts, Health Careers and Home Economics.

In Career Guidance, the students are made aware of their own interests, abilities and future goals, through testing, group and individual counseling, and career research. In the other Career Clusters where exposure rather than proficiency in any one career area is stressed, activities cover a wide range: the students learn of the many careers in each Cluster, receive hands-on experience, go on field trips to various community industrial sites, visit area technical schools available for them to attend part-time or full-time during their high school and post high school year, view career films, and interact with community guest speakers from all Career Clusters. The goal is to make the student aware of the many careers available to him in the particular Career Cluster. The hands-on approach provides the student with actual experience in this area thus enabling him to decide more knowledgeably whether or not to pursue a given career.

The 8 objectives of Careers are:

1. The student will be able to identify correctly proper job attitudes in each occupational cluster.
2. The student will be able to select correct answers pertaining to educational requirements for various occupations.
3. The student will be able to recognize his own capabilities, interests, and aptitudes in a wide variety of occupational situations.
4. The student will be able to understand the basic process of production, processing and distribution in the American work economy.
5. The student will have a knowledge of the personal responsibility involved in making career decisions.
6. The student will be able to fill out a job application correctly and participate in a job interview.
7. The student will understand the importance of appearance, attendance, and safety in the world of work.
8. The student will be able to develop a list of community resources necessary to secure employment (newspaper, N.J. Employment Offices, Personnel Offices, etc.)

The manual is designed to conform with the two listed sets of objectives to accomplish the goal of the program: Seven (7) objectives for the Communication areas and eight (8) for the Career areas. The first part of the manual details the four courses in Communication and the second part details the 8 Career courses plus an additional course, Environmental Science, which may be substituted for Agriculture if there is no teacher qualified in agricultural science.

Each unit is presented as a complete course of study including individual objectives with activities designed to accomplish them and the necessary time lines.

In the Career areas, each course of study has its own evaluation design in the form of a pre/post test; in the Communication area only one pre/post test is utilized. All students within the program are also pre and post tested with the "Crites Maturity Inventory"; and evaluate the entire course of study in writing at the end of the year. The last two evaluation tools will be discussed at length in the WORK-ED Administration Manual.

Students in Communications and Careers must be constantly reinforced with the ultimate goal of the program. To further this goal, a minimum of four staff meetings a year should be held for all teachers in the program. A major purpose of these meetings is to share common problems that may arise and arrive at solutions and to discuss various techniques that have been successful.

The suggested size of the Communication classes is 25 students or less and the suggested size of the Career classes is 13 or less. The latter must be smaller because of the hands-on-aspect of this segment of the program. The program is designed for approximately 100 ninth graders and 12 teachers. If student population is increased, the ratio of teachers should increase.

Each teacher of Communications instructs each group of 25 students for one marking period, 45 days, or the equivalent of 1/4 of the school year. Each Career teacher instructs 13 students for 1/2 the marking period, 22 days, or the equivalent of 1/8 of the year. By the end of the year, each teacher in the program will have taught each of the 100 students. Scheduling is the responsibility of the coordinator of the program and will be detailed in the Administration Manual.

Although field trips and guest speakers are scheduled by the Coordinator, each teacher contacts individuals within the community to enlist their participation in the program either as a guest speaker or as host for the use of their facilities as a field trip site. The teacher of woodshop is more likely to gain the cooperation of the local building contractor than the Coordinator, who may lack knowledge of this Career. In the same manner, *all* teachers should be instrumental in the formation of the WORK-ED advisory committee, which should be made up of community professionals who will be resource people for the program.

Additional information on the securing of the Advisory Committee, field trips, and guest speakers will be detailed in the Administration Manual and will be fully discussed in the workshop preceding implementation of the program.

Grading is done on a numerical basis because the student's grade for each marking period is a composite of 3 grades: 1 Communication class and 2 Career classes.

Student's grade = Communication class 50%
Career 1 25%
Career 2 25%

Each teacher turns in his grades to the coordinator who averages the grades and posts them on the student's report card. The student's final grade is an average of the 4 grades posted each marking period on the report card.

All the components of the program are detailed in this manual. The most important component however, is a human one, you, the classroom teacher. You are the one who gives the program life. It is your individual expertise and enthusiasm that will ultimately make the program successful through the positive approach. The message to convey to the students is that in today's complex world of work, *everyone* can find job satisfaction, if he plans ahead.

The format for each course of study in Communication is consistent throughout the manual and contains:

A. Introduction
B. Course Objectives
C. Activities to accomplish course objectives
D. Resources – Material and human resources utilized by the teacher with the students in particular activities
E. Bibliography – Books utilized only by the teacher for reference purposes
F. Student material for duplication including evaluation instruments

The Career areas follow the above basic format but have additional areas because of the course content:

A. Introduction
B. Course Objectives
C. Activities to accomplish Course Objectives
D. Careers in Cluster
E. Glossary of Terms (where necessary)
F. Resources
G. Bibliography
H. Student material for duplication

SECTION 1

COMMUNICATIONS

COMMUNICATIONS I: VALUES CLARIFICATION

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Values Clarification

by Patricia Michael

A. INTRODUCTION

The purpose of the Values segment of Communications is to provide the technically oriented and potentially terminal pupil with the opportunity to examine his own values, consider those of others, and express his views creatively and effectively through frequent writing and discussion activities about life in general. The course emphasizes the practical skills of effective writing, speaking, reading and listening which are essential to all occupations. Since this student will soon be entering the world of work, he must realize that values and communication skills go "hand-in-hand" and are necessary for any career in life. The teacher should act as a guide not a dictator, in aiding the student to think logically and express himself imaginatively, thus enabling him to make sensible decisions, follow directions, and develop a good attitude about his own and other's contributions to the class. The consideration of the thoughts and feelings of others is constantly encouraged. Another major goal is to enable the pupil to experience self-satisfaction from his efforts, thus further developing his self-respect and a sense of accomplishment in individual and group projects.

The work is done mostly in the classroom. The teacher first introduces an interesting lesson and then guides the pupils to complete their work giving as much individual aid as possible. Both individual and group responses are encouraged in reading and written assignments, films, guest speakers, and trips. Pupil involvement is encouraged. Informal discussions of personal views, feelings, and ideas may either introduce or conclude stories, poems, plays, films, or writing assignments. Most written and reading assignments are completed in class; occasionally work is done outside of class, such as interviews, extra-credit reports, reading for pleasure, or make-up work. Variety is the key to a successful course!

B. COURSE OBJECTIVES

1. The pupil will develop self awareness and consideration for others.
2. The pupil will form better work habits, more positive attitudes and values for life.
3. The pupil will realize a sense of pride and success in both individual and group accomplishments.
4. The pupil will improve both oral and written communication skills in order to express himself more effectively.
5. The pupil will become aware of the relationship of communication skills and the world of work.
6. The pupil will develop decision making skills.
7. The pupil will learn to listen carefully and follow directions accurately.

From pre-testing and observation the teacher notes group and individual weaknesses in reading, writing, and oral communication. Students are advised that in the post testing results, at least a 30% increase in improvement is expected.

In final oral and written assignments, the pupil demonstrates his ability to cooperate with his peers, show respect for his own work and that of others, and displays a 40% increase in awareness of the importance of values and positive attitudes.

Throughout this segment of Communications, teacher evaluation of pupils is based on written assignments, discussion activities, behavior and attitude, participation, et al. Letter grades A – F, numerical grades 0 – 100, S, U, etc.; and √, √+, √– are employed to indicate quality of work. Bonus questions for extra-credit are provided on tests as well as extra-credit assignments to encourage interest and initiative. Pupils are frequently given a second chance to improve a writing assignment by correcting and re-writing for a better grade. Grades may be based on originality and creativity as well as accuracy of expression. Again, "variety" is the key word.

A Pre/Post test for all 4 Communication courses is given at the beginning and at the end of the year. See appendices of manual, p. 181.

C. ACTIVITIES

The first weeks are devoted to values activities based on *VALUES CLARIFICATION* by Simon, Howe, and Kirschenbaum, a handbook of practical strategies for pupils and teachers. Later in the course, values continue to be explored through short stories, plays read aloud in class, films, story endings pupils write in class, and active discussions. Included here are some major activities applicable to materials available for any creative teacher plus those activities which need more specific resources.

By offering the pupils variety in methods, assignments, grades, and materials, the skillful teacher creates an aura of suspense and interest. Don't tell them in advance what will take place on the following day! Surprise them! Stop the class sometimes at a vital moment, like the soap operas . . . just before the bell rings of course, but at a moment of high interest. Tell a joke or a riddle, have a sense of humor. You can judge if the class is with you and interested when they remark "this class goes so fast!" or when they ask, "What are we going to do today! or tomorrow?" Never tell!! Create an air of mystery and involvement, and *always* have about three different plans at hand in case the class lags or problems occur. Plans for each day will generally include all or most of the objectives listed previously. Each day be ready to read, write, think, and talk; have the pupils utilize all the communication skills possible each period while skillfully weaving in values and awareness of the world of work. Use the chalk board for pictures as well as for words of explanation. Try different seating and standing arrangements; use the floor at times.

UNIT 1: ICEBREAKER

Objectives 1 – 4 *(See page 8)*

Time line – *Two to three days.* It should not be dragged out, although everyone should get the opportunity to contribute to the discussion. The next activity may follow *or* the teacher may wish to incorporate a grammar lesson on abstract nouns in relation to defining values and emotions at this time.

1. The "icebreaker" activity for the first day is to give each pupil a 3" x 5" card on which to write any of the following in each corner of the card:
   - a. You have 24 hours to go wherever you desire – all expenses paid. Write down where you will go. (upper left)
   - b. Choose an object of importance or value to you (a person or an animal). Write down the name of the object (upper right).
   - c. Write down your favorite activity that you don't mind mentioning. (lower left)
   - d. Write down the name of any person (outside of family members) who has helped you or changed your thinking for the better. (lower right)
   - e. What is the most important value to you? (Be ready here to explain what a value is!) Write the value in the center of the card.

Unit 1 incorporates the skills of listening, thinking, writing, and speaking. All the words listed on the card promote a discussion. Most pupils are eager to share what is important and meaningful to them and curious to discover what others have written. This discussion usually begins before the end of the class period and therefore continues the following day. By discussing each person's contribution, at least 2 observations are made: 1) How we differ in our likes and dislikes, and 2) How often we have the similar likes and dislikes of another individual, noting that we often have something in common with others. The pupils do not realize at this time that these interest inventories on their cards will be helpful in a few days when they are asked to write a paper about themselves entitled, "I Am Somebody . . ."

Before and after writing the value in the center of the card, the teacher leads a discussion on values and positive attitudes for school, home, work, and life in general. Try to get pupils to consider their most important value in relationship to themselves or what they consider important in others. (Originality should be stressed so that you do not get 25 cards that say "Friendship" in the center.) In addition to developing values, this is also a good way to introduce or review abstract nouns for a grammar lesson! (See G – page 18.)

UNIT 2: FAVORITE ACTIVITIES CHART

Objectives 1, 2, 4, 6, and 7 *(See page 8.)*

Time line – *3 days*

A follow-up activity[1] is to have pupils list 10 favorite activities they can freely mention. Teacher should also list his or hers on the board as examples with such items as: swimming, biking, eating, talking, watching t.v., reading, tennis, etc. Some will have difficulty in listing 10; others will have more than the required amount. Call "time" when most seem to have completed their lists, and have them make four or five columns to the right of the activities list. Title columns:

- a. A/P (for alone or with people)
- b. R (for risk involved)
- c. $5 (for costs $5 or more to do)
- d. m/f (for mother and/or father enjoy this too)
- e. 3 (for anything done within the last 3 weeks)

---

[1] See Simon, Howe, and Kirschenbaum, *Values Clarification*, Strategy #1, "Things You Love to Do," pp. 30-34.

For each column, pupils calculate their scores: How many A's? How many P's? What does this tell you about yourself? Remind them there are no right or wrong answers. Discuss the possible indications. Some may be surprised at their results. After each column has been discussed, the pupils consider what they have discovered or realized about themselves in terms of their own interests. Turn papers to reverse side, and have them jot down a rough draft of a paragraph which begins, "I Am Somebody Who . . ." This begins the preparation for the next day's class assignment.

UNIT 3: "I AM SOMEBODY . . ." ESSAY

Objectives 1 – 7 *(See page 8.)*

Time line – *Two to three days* with papers written, corrected, (possibly rewritten), graded, and read aloud if desired by pupils. This lesson may be combined with a reading lesson for those pupils who finish first, if so desired.

After a discussion of the paragraphs started at the end of the previous activity, pupils proofread their paragraphs of "I Am Somebody . . ." They may continue to write a theme about themselves using the following suggestions and develop this copy as a rough draft, *or* they may rewrite the first paragraph and succeeding paragraphs on clean paper. Suggestions for completing their essays about themselves:

a. The first paragraph may start as "I am somebody who enjoys . . ." Here they mention the interests they realize from the values, activities and interests they have listed on their cards at the beginning of this course and from the chart they developed in the previous activities. Their papers might include conclusions based on self-awareness resulting from their reactions and observations about themselves in the first two activities. These paragraphs reveal realizations about themselves and their interaction with others.

b. For the following paragraph(s) have pupils include other "favorites" such as foods, colors, records, t v. shows, etc. Allow freedom for them to describe items about which they exhibit enthusiasm and strong positive feelings.

c. In contrast, a final paragraph might include an object or aspect of life strongly disliked. By limiting their choice to *one*, decision making is required.

This may be a good point in time to mention individual reactions and emotions, the many forms of expression and communication of one's feelings, thus introduce the use of the daily class journal in the next activity.

UNIT 4: DAILY IN-CLASS JOURNAL

Objectives 1 – 5 *(See page 8.)*

Time line – *A daily assignment for 10 minutes each period* as often as class meets, or for a specific length of time, as one month, used to supplement other writing assignments and class activities and to add variety.

For one month or longer the pupils are asked to keep a daily in-class journal or diary to express their ideas, thoughts, feelings, and opinions. All comments are confidential and accepted. At the end of the month the teacher reads the journals and any student may request an extra credit grade for keeping the journal.

Entries may be made on notebook paper provided and kept in the manila folders retained in class for the work of each pupil. Notebooks, folders, and pages must be readily available each day to enable the pupil to write an entry in his journal. This activity provides an outlet, a means of expression, and possibly a laugh in later years.

Suggestions from the teacher may be needed at times to stimulate the thinking of those who have dull days with little inspiration for writing; others will not need this encouragement.

UNIT 5: JOB INTERVIEWS AND RELATED ACTIVITIES

Objectives 1 – 7 *(See page 8.)*

Time line – *Four to six days, in class and out;* can be modified or expanded depending on the desire and the creativity of the teacher; can be combined with some of the other activities.

After the beginning weeks other value clarification activities (see *Values Clarification*, Simon, Howe, and Kirschenbaum), are employed once a week or interwoven with other communication activities. In the following weeks, emphasis is placed upon developing more effective writing and reading skills, thus combining value awareness and career awareness with the need for improved communication skills.

A popular out of class assignment is to interview people about their jobs. (A, B and C, p. 16.) Pupils thus accomplish the following:

a. Orally interview persons who have jobs of interest; what are these persons' chief values in regard to their jobs?
b. Discover the strengths and weaknesses of these jobs.
c. Realize the amount of pay involved, other benefits, and possible disadvantages.
d. Discover how people obtained their jobs and what kind of training or experience was needed. Do they enjoy their jobs?
e. Develop perceptions of these jobs and vocabularies by creating a list of words and terms related to the occupations.
f. Write an effective report based on an oral interview.

This activity may be followed by guest speakers from various career areas. (See Resources, Guest Speakers, p. 15). Field trips to nearby businesses or industry enhance this assignment, adding a spark of reality to class career awareness activities. Terms such as "foreman", "employer", "employee", "personnel manager" are discussed further in assignments such as Unit 6, which also relate to reading for details and for enjoyment.

UNIT 6: READING RELATED TO VALUES AND CAREER AWARENESS

Objectives 1 – 6 *(See page 8.)*

Time line – *Three to four days.*

An example of adapting a story for career awareness and consideration of character values may be noted in Richard Connell's "The Most Dangerous Game", a short story found in many anthologies. *Literature for Life*, edited by Jewett, Lass, and Early, contains it and many other interesting but easy to read stories suitable for class activities and value discussions as well as literary appreciation. Activities suggested for this story are appended: (See appendix p. 17.) A vocabulary development lesson relating to this story may follow, with teacher or pupils writing unfamiliar words from the story on the board or listing them on a ditto sheet for definition and discussion. (See C, p. 18.) This provides a fine opportunity to teach the basic elements of the short story. (See E and F, pp. 17, 18.)

Sources for other reading activities are: *Searching for Identity*, Abromowitz and Halliburton, which includes high interest and low reading level short stories, poems, plays; *Open-Ended Stories*, Velder and Cohen, useful in Unit 7 on creative writing; the monthly issues of *Read* magazine, "devoured" by pupils, which provide good discussions on their plays and timely articles.

UNIT 7: CREATIVE WRITING ACTIVITIES

Objectives 1 – 5 *(See page 8.)*

Time line – *One day for each writing assignment and another for completion, reading, rewriting if desired, and return to pupil.*

Creative writing may be encouraged by various methods and media such as actual objects, e.g. fall leaves, stones or rocks, greasy tools, unusual plants, empty boxes, etc. that evoke sensory responses, as well as films that encourage use of the imagination. These provide mental stimulation contributing to questions and comments so that the creative thinking and writing assignment for the day may be related to these visual aids, and to the pupil's personal thoughts, experiences, and values. Many values clarification activities also lend themselves to creative writing lessons.[1]

By using more than one object or topic, variety is presented for pupil choice, thus removing from the teacher the burden of reading 20 to 30 themes on the same object or idea. An unusual poster or painting, a picture from a newspaper or magazine, a vase of lilacs that have withered by the end of the week, a lemon, or any object that seems out of place in a classroom may provide inspiration for a first person theme: "Pretend you are this object and describe in two or more well-written paragraphs what your life has been like." Or "Describe your life and your appearance but do not tell what you are." Such themes must be read aloud with class members guessing the identity of each object. The *Open-Ended Stories* read by the pupils and completed in class offer a variety of situations for which pupils provide endings in their own personal styles; they are more fun if read aloud without names. Sometimes papers are read aloud after they have been graded, and pupils are allowed to grade papers. Averaging their grades and placing both grades on papers will indicate the hardest markers!

UNIT 8: 28 DAYS OF VALUES EXERCISES

OBJECTIVES 1 – 7 – VALUES CLARIFICATION:

Day 1: **Activities –**

1. Introduce self: Introduce course
2. Pass out cards:
   Front: Name and homeroom, group
   Back: Value (in center)
   object, place, person, and activity (favorite)
3. Discuss: Cards, self identity

Day 2: **Activities –**

1. Complete discussion of individual – "likes" on cards.
2. Assign: Paragraph: What is a *Good* Job?
3. Values chart – (use board) – List 10 favorite activities. (more?)

Days 3-4: **Activities –**

1. Favorite activity chart: list –

A/P	R	$	M/F	3
(alone-people)	(risk)	($5 or more)	(parents)	(within 3 weeks)

2. Count up scores: What do they tell?
3. Related Theme: "I Am Somebody" – to be written – in class

Days 4-5: **Activities –**

1. I Am Somebody – Theme (Who am I?)
2. This follows – consideration of likes, dislikes, etc.
   Read page 7 "PHIZZOG", *Searching for Identity*, (see page 22).
   Vocabulary roots – prefixes/suffixes
3. Read "Gary Fowler" pages 27-31 (FEAR)
   Do exercise, page 31 (days 5-6)

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[1] See Simon, Strategy #5, "Either – Or Forced Choice", pp. 94-97, for a "first person" story of an inanimate object. (A fun and worthwhile activity, this releases energy and tension in class, when exercise is needed.)

Days 7-11: **Activities –**
1. Read: "The Most Dangerous Game"
2. Use board for vocabulary words from story – discuss, list, and use
3. Discuss: Setting, action, characters –
   Teach: Protagonist and Antagonist

Days 12-13: **Activities –**
1. Assignment: Interview 1-3 persons (see sheet) about their jobs.
2. Above should be done after first paragraph has been corrected for structure and expression of ideas, returned, and rewritten (optional).

Days 14-15: **Activities –**
1. Read – Job Situations (problems)
2. Write out solutions
3. Discuss solution – dealing with better relationships and attitudes on the job.

Days 16-17: **Activities –**
1. Read page IX, 2-4, 23, *Search for Identity.*
2. Discuss – "Nobody" vs. "Somebody" – Success? Communication? Work?
3. Read and Discuss story, page 23, "Jeff" (in text: *Open-Ended Stories* – Optional)

Days 18-19: **Activities –**
1. Discuss poems in terms of (simile/metaphor/analogy).
2. Write original – simile and metaphor
3. Describe your favorite – Color, food, smell.

Days 20-21: **Activities –**
1. Creative thinking exercise – Abstracts – (see text: *Write Now!!*)
   Love is ---, Loneliness is ---, et al. Express feelings.
   Create a compound poem – each pupil adds a line. Type on ditto, distribute.
2. Do again, individually (for grade).

Days 22-23: **Activities –**
1. Stand-up activity – Choice – Would you rather be ---
2. Written problems – Discuss in small groups, present ideas, orally to *all*

Days 24-28: **Activities – NATURE: ECOLOGY UNIT – H.O.P.E.**
1. Discussion – Protecting and Preserving Nature
2. Speakers and Slides (Science Department)
3. Follow up – activities – Values, posters, work.

CONCLUSION

A varied and flexible program comprising reading, writing, viewing of films, talking, listening, and testing, ensures against boredom for teacher or pupils. Learning and teaching are more fun when praise is given and received, a dull routine avoided, and consideration extended by both teacher and pupils to each other. Pupils' papers may not only be read aloud, but may occasionally be mimeographed and displayed together with projects on bulletin boards, but only with pupil's consent.

Since people need recognition, projects such as a class newspaper, a compound poem (where everyone adds a line), a composite research report, an ecology project for the school or community, a poster-making contest (where spelling counts) or any other group project not only incorporate the previously discussed values, but also employ communication skills, encourage involvement and cooperative work habits. These projects develop feelings of successful individual accomplishment as well as the sense of satisfaction, pride, and pleasure in group work.

For a final activity, pupils can write a letter at the end of the course revealing their likes and dislikes about this part of the program. (Make clear that the results will not affect their grades.) Their comments can provide food for thought, sincere praise and criticism, a demonstration of improved communication skills, and the rewards of an enhanced self awareness, consideration for others and growing maturity on the part of many pupils.

D. RESOURCES

GENERAL

1. Globe Book Company's *Learning Trends Program* presents suitable paperback reading books of high interest level for slower readers, such as *Open-Ended Stories, Searching for Identity,* and *Write Now!*
2. Numerous films may be secured from Guidance Associates relating to values and careers: other films may be used to stimulate imaginations for creative writing.
3. Any anthology of literature may be used by the creative teacher to assign stories and poems to be read for enjoyment, discussed for literary appreciation, and related to the values and objectives listed.
4. Additional workbooks and duplicated copies of materials from diverse sources add to the variety of subject matter.

1. BOOKS

Abromowitz, Jack and Warren J. Halliburton, *Searching for Identity*, New York: Globe, 1973. ($2.94)

Dodd, Anne Wescott, *Write Now!* (Insights into Creative Writing), New York: Globe, 1973. ($1.50)

Jewett, Arno, A.H. Lass, and Margaret Early, ed., *Literature for Life*, Boston: Houghton Mifflin, 1958. ($6.00)

Simon, Howe, Kirschenbaum, *Values Clarification*, New York: Hart Publishing Co., 1972. (1 teacher's copy only – $3.95)

Velder, Milton and Edwin Cohen, *Open-Ended Stories*, New York: Globe, 1973. ($1.90)

2. WORKBOOKS AND MAGAZINES

Goltry, M., *Forms*, New York, 1975.

READ magazine, Xerox Corporation, monthly issues of short stories, plays, puzzles, et al., ($1.90 per pupil per year)

3. FILM STRIPS: See Guidance Associates, Pleasantville, N.Y. for catalogue and further listings. ($41.50 each)

Do We Live or Exist?
Career Values – What Matters?
Liking Your Job/Your Life
Why Work at All?
Dropping Out
Somebody's Cheating
Your Job Interview
Dare to be Different
Where You Stand
On the Job

4. FILMS: The following films are used for discussion on ecology and for creative writing. (They may be rented or purchased.) Neither film is narrated.

Buttercup, 11 min., color, Dimension Films from Churchill Films, 662 North Robertson Blvd., Los Angeles, Cal. 90061. ($130)

Rainshower, 14½ min., color, Dimension Films from Churchill Films, 662 North Robertson Blvd., Los Angeles, Cal., 90061. ($170)

5. GUEST SPEAKERS: Use friends and acquaintances, persons in the school system with special interests or "second" jobs, and interested people from the community.

BIBLIOGRAPHY

"Search for Values," *Dimensions of Personality*, 38 West Fifth Street, Dayton, Ohio: Pflaum and Standard. (1 set needed)

Simon, Howe, and Kirschenbaum, *Values Clarification*, New York: Hart Publishing Co., 1972. (1 teacher's copy needed)

E. STUDENT MATERIAL FOR DUPLICATION

A. INTERVIEW ACTIVITY

Interview three people who have jobs that interest you. Ask the following questions; and write out the answers from what these people tell you.

1. What position or title do you have?
2. Do you enjoy or dislike your job?
3. What skills or training does your job require?
4. How did you choose your job and get hired?
5. What previous experience(s) did you have that proved helpful?
6. What are the best and worst things about it?

B. INTERVIEW PART II: FEEDBACK

(The material within this format will differ with each group)

Check spelling:

secretary
aluminum
financially
locally
knowledge
applied
requires
grammar
available
enjoys
employs
employee
employer
choose
chews
chose
course
coarse
county

1. All the words above came from your papers. Check the spelling, please. Is yours correct?
2. If you have a letter grade on your paper (like A–), make the corrections and get a higher grade.
3. Those who have a √ – should complete the assignment, following the directions to get a letter grade.
4. Those who did "zilch" – 0 – do something by tomorrow, for heaven's sake!
5. Hand in second sheet on *What is a Good Job?*

These are the jobs you told about:

mechanic
secretary
bookkeeper
carpenter
receptionist
manager
lawyer
nurse
cashier
accountant
janitor
painter
field worker
garage owner and mechanic
telephone co. foreman
worker in circulation dept.
salesperson
radiator repair man
factory worker
clerical worker
watchmaker
aluminum siding business – owner
machinist
intercounty power worker
paper person
gas man
street department worker

Choose any two jobs and tell the good and bad points for each.

C. A JOB FOR YOU

What is a *really good* job?

How can you find out about it? List ways:

Why would you like to do this job?

D. IMAGINE

(This format is applicable to many short stories)

Imagine yourself as the personnel manager for Safari Inc. Your boss expects that you will choose the best person qualified to fill the present job-opening in the company. The opening is for an experienced hunter who can lead a group on a safari through the dense jungle of Death Swamp.

If you select the right person who does the job well, it will make the company look good, and you will probably get a raise; however, if you choose a person who fails to do the job well, and the customers in the group then complain to your boss, you could lose your job.

These are the requirements for the job: "Experienced hunter needed to lead group of wealthy British and American tourists on a safari. Must have knowledge of the wild life and weather conditions of the Caribbean jungle areas. Must be cultured and sophisticated to hold interesting and intelligent conversation with group members, and sensible enough to see to the safety and comfort of those on the trip. Resourcefulness, quick-thinking, and strength may be of importance."

Three applicants responded to the above ad; consider their qualities:

General Zaroff
Ivan the Cossack
Mr. Sanger Rainsford

Read pages 3-17 "The Most Dangerous Game" in *Literature for Life.* From reading this story, decide which person you would choose for the job. Base your decision on the one you feel best fulfills the requirements stated above and the one you believe will be the most dependable. Use both the facts from the story and your own imagination.

Write a report to your boss in which you recommend one of the above applicants, clearly stating the reasons for your choice. Check your spelling, sentence structure, and grammar. Be neat! Remember, *your job* depends on your choice *and* on your report!

When this assignment is completed, see how many words in the story you can define. (See next sheet.)

The purpose of this assignment is to have you *read* carefully, *think* logically, make decisions, and *write* neatly, expressing facts and your own thoughts on the matter. In general, the purpose is to help you to communicate more effectively, and think about how this relates to real life and careers.

E. TERMS OF IMPORTANCE

The purpose of this assignment is to help develop your vocabulary, to increase your knowledge of literature and style and to improve grammar.

A. Short stories have certain parts or elements: *(teach and discuss in class)*

Characters
Setting
Plot
Protagonist
Antagonist

Conflicts (3)
Mood
Climax
Conclusion

B. Literature means *all* forms of writing that are read. Style is the special way the author or poet writes. Some authors are more *descriptive* than others; some authors use more *dialogue.* Some are *imaginative*; some *realistic.*

Description
Dialogue

Imagination
Realism

C. Define: *(These terms will differ with each story)*

superstition
palpable
jaguar
realist
tangible
lacerated
palatial
chateau
gargoyle

medieval
feudal
borsch
filet mignon
personnel
employer
employee
uncouth
analytical

instinct
attributes
quarry
mid-Victorian
barbarous
civilized
siesta
tropical

staccato
crimson
ennui
Chablis
safari
sophisticated
naive
gullible

F. QUIZ 1

A. Fill in with correct word.

1. ____________________ 1. the main character of a story
2. ____________________ 2. the character who causes the conflict
3. ____________________ 3. the general feeling or atmosphere of the story
4. ____________________ 4. events or actions that reveal what happens
5. ____________________ 5. the highest point in the action; or the turning point

B. Define:

1. setting –
2. List three kinds of conflict –
   a. ______________ vs. ______________
   b. ______________ vs. ______________
   c. ______________ vs. ______________
   Which one is found in "The Most Dangerous Game"? ______________ vs. ______________
3. characters

BONUS FOR EXTRA CREDIT:

Who is the protagonist in "The Most Dangerous Game"? ____________________ Why?

Who is the antagonist in "The Most Dangerous Game"? ____________________ Why?

G. QUIZ 2

A. Match by placing letter in the blanks.

____ 1. Concrete noun
____ 2. Abstract noun
____ 3. Connotation
____ 4. Denotation

A. Object seen and felt
B. Real, direct, dictionary meaning of a word
C. Exists but is not seen (as a feeling) as an object
D. Associated meaning for a word

B. Place the letter "A" for Abstract Nouns; and place the letter "C" for Concrete Nouns

____ 1. Kindness

____ 2. War

____ 3. Book

____ 4. Loneliness

____ 5. Sneaker

____ 6. Hope

____ 7. Wrist Watch

____ 8. Chalk

____ 9. Fear

____ 10. Happiness

____ 11. Wallet

____ 12. Money

____ 13. Autumn

____ 14. Understanding

____ 15. Love

COMMUNICATIONS II: WRITING SKILLS

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Writing Skills

by Dennis Collins

A. INTRODUCTION

The very title of this program (Communications and Careers) strongly suggests the inseparable relation between the roles of work and human communication. Students enrolled in this program should realize that regardless of the occupation they pursue or eventually enter, a fundamental literacy must prevail which plays a large part in their success on the job as well as in the types of lives they build around their jobs. The teacher of Communications, should stress the student's need for developing this literacy in its broadest, most varied forms.

Evaluation is ongoing; several grades may be given for each unit of study. Sample tests are included in Section F, p. 27. A Pre/Post test for all 4 Communication courses of study is given at the beginning and at the end of the year. (See appendices of manual, p. 181.)

B. COURSE OBJECTIVES

1. The student will be able to define and utilize selected terms and words related to the world of work.
2. The student will research skills that will enable him to discover and report on the numerous jobs and career areas available to future workers.
3. The student will exhibit oral literacy skills which he will be able to apply to specific career areas and/or job-related activities.
4. The student will develop listening comprehension skills which he will be able to apply to specific career areas and/or job-related activities.
5. The student will develop specific writing and grammatical skills which he will be able to apply to the process of entering as well as functioning in the world of work.

C. ACTIVITIES

UNIT 1: DEFINING TERMS

Objective 1: The student will be able to define and utilize selected terms and words related to the world of work. **Time line**: 3 – 4 days.

1. Explain the importance of general vocabulary development.
2. Teach the difference between an "active" and "recognition" vocabulary.
3. Teach the term "jargon" (as related to specific occupations, areas of knowledge, etc.).
    - a. Ask for examples of jargon from television programs (police shows, etc.).
    - b. Put examples on the board (e.g., military, or medical jargon).
4. Teach the "jargon of working and careers":
    - a. job prospects
    - b. fringe benefits
    - c. severance pay
    - d. workmen's compensation
    - e. job termination
    - f. senority
    - g. swing shift
    - h. job turnover
    - i. collective bargaining
    - j. incentive pay
    - k. apprenticeship
    - l. civil service
    - m. job security
    - n. multiple careers
    - o. career options
    - p. paraprofessions
    - q. salary vs. wage

Suggested follow-up activities

1. Have students discuss these words with members of their families or other adults who are working.
2. Ask class to bring in examples of fringe benefits they have found (from discussion with working adults) to be valuable.
3. Have class do a brief summary, written or oral, of 3 – 5 working people to determine the most common or useful fringe benefits.

UNIT 2: DISCOVERY AND REPORT

Objective 2: The student will research skills that will enable him to discover and report on the numerous jobs and career areas available to future workers. **Time line**: 4 – 5 days.

1. Teach the importance of knowing generally the vast number of occupations in America. Reinforce the importance of "Career Options" or "Multiple Careers" as taught in the "jargon of working."
2. Take class to the school library or career resource area; have librarian teach the fundamental use and layout of the library.
3. Acquaint students with some basic books and guides available to persons choosing and/or researching particular occupations.

   Examples:
   a. *The Encyclopedia Of Careers And Vocational Guidance*
   b. *Concise Handbook Of Occupations*
   c. *Occupational Outlook Handbook*

Suggested follow-up activities

1. Have student randomly choose (from a container of several job titles written on small sheets of paper) a job title and use the library facilities to write a brief report on that job. (See D, p. 29.)
2. Give a brief quiz on the use of a library and on some titles of books which contain career information.
3. Have librarian prepare a brief list of government departments, agencies, and addresses where students can write for additional career information.

UNIT 3: LITERACY SKILLS

Objective 3: The student will exhibit oral literacy skills which he will be able to apply to specific career areas and/or job-related activities. **Time line**: 3 – 4 days.

1. Explain the concept of oral literacy as opposed to written literacy; stress the importance of being heard and understood.
2. Ask the class for examples of people in everyday life whose job depends on efficient oral communication.
3. Assign a short paper on a sportscaster, T.V. entertainer, or political figure who displays good oral communication.
4. Teach the basic criteria for effective oral communication: voice, eye contact, posture.
5. Individual impromptu assignments: Have each student come to the front of the class and randomly choose a topic for a 1 – 2 minute talk. Have class write a brief evaluation of each student's performance.

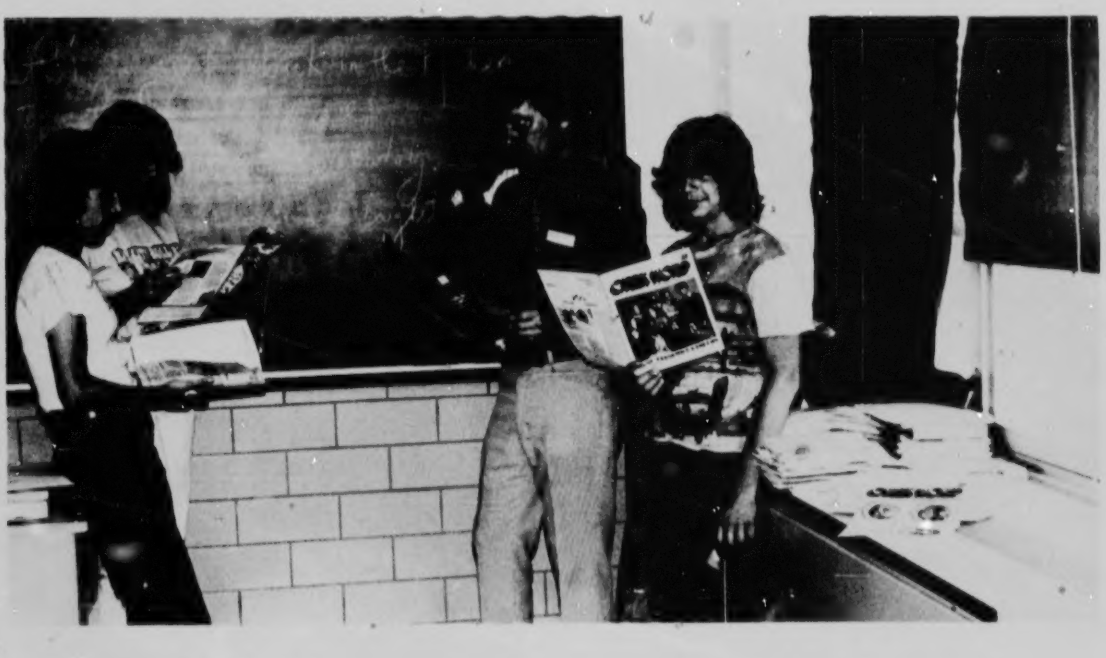
   SAMPLE TOPICS:
   – What I enjoy (most or least) about my freshman year in high school is . . .
   – If I could or had to work for the rest of my life, my job would be . . .
   – The one thing that would make me very happy would be . . .
6. Group assignment: See F, Student Material for Duplication for an explicit example of a group communications assignment ("The New Society"), p. 28.

7. Relate oral communication skill to specific career and/or job-related activities.
   a. Teach examples of career areas requiring effective oral communication.
      1. sales and business; 2. secretarial, clerical work; 3. social service (waitress, barber, beautician, social worker); entertainer (singing, acting, directing)
   b. Teach examples of job-related activities requiring effective oral communication skills.
      1. executive and managerial positions; 2. labor relations (committee leaders, spokesmen, arbitrators, negotiators); 3. supervisory and foremen positions.
8. Summarize and review the essentials of effective oral communication. (see #4 above).
9. Have students interested in careers related to oral literacy compile a further list of such jobs from *Career World Magazine.*

UNIT 4: LISTENING COMPREHENSION

Objective 4: The student will develop listening comprehension skills which he will be able to apply to specific career areas and/or job-related activities. **Time line:** 2 – 3 days.

1. Teach the importance of developing good listening skills.
   a. on the job training
   b. following instructions
2. Teach the difference between "listening" and "hearing" (greater concentration and retention required).
3. Have class read the introduction to Chapter 21 ("Listening") of Warriner's English Grammar and Composition (9)
   a. Teach listening "to gain information"; assign Exercise 1, pp. 466-467.
   b. Have class compose their own listening exercises, come before the class, and present their exercises to "test" listening comprehension.
   c. Teach listening "to receive instructions"; assign Exercise, p. 467.
   d. Have class prepare their own set of "instructions", select individual students and have them read their instructions to the class for evaluation purposes.



4. Read a brief article from *Career World*, follow up the reading with a brief listening comprehension quiz, e.g.
   - What training was specified in the article as needed for . . . work?
   - What were the job prospects mentioned regarding a career in . . . ?
   - What did the article mention as the chief disadvantage of working . . . ?
5. Teach "critical listening" (pp. 472-473 of Warriner's), assign Exercise 12, p. 473.
6. Read selected passages from "Success and You" (Part I) of *Career Development Service*; follow up the reading with a listening comprehension quiz.

UNIT 5: WRITING AND GRAMMATICAL SKILLS

Objective 5: The student will develop specific writing and grammatical skills that he will be able to apply to the process of entering as well as functioning in the world of work. **Time line**: 6 – 8 days.

1. Teach the importance of developing writing skills and improving grammatical style.
2. Teach examples of career areas which involve writing and grammatical skills.
   a. Paraprofessions; b. Accounting, Clerical, Business; c. Copywriting, Journalism, Creative writing; d. Technical writing.
3. Teach examples of job-related activities and the process of applying for jobs, both of which incorporate writing skills.
   a. Research and report writing; b. Data preparation, memos; c. Job applications, resumes; d. Letters of inquiry, reply, etc.
4. Teach basic report writing. See F, for a specific report format ("Career Research Assignment").
5. Assign introductory reading to Chapter 16 ("Writing Summaries and Reports") of Warriner's Handbook, p. 344.
6. Teach the "Summary report" technique, p. 344-347.
   a. Assign a brief article from either *Career World* or *Career Development Service* (Part I or II) and have class summarize the basic points of the article.
   b. Have class choose several careers of interest to them and find a related article in *Career World*. Distribute copies of "Career Research Assignment" and have students do the report according to the instructions and procedure learned.
7. Teach the difference between summarizing and paraphrasing.
   a. Teach the technique of paraphrasing by writing a simple, everyday quotation on the chalkboard. Example: "An apple a day keeps the doctor away." (See e, p. 29.)
   b. Have class express their own paraphrase in sentence form.
8. Distribute sheets of similar quotations for homework or classroom practice. See F for suggestions and examples.
9. Have class choose a paragraph or passage from an article in *Career World* for further practice in paraphrasing research material.
10. Suggested follow-up activities:
    a. Provide copies of readable, interesting poetry for paraphrase practice.
    b. Distribute copies of selected song lyrics for listening and paraphrase practice.
11. Teach basic grammatical style according to class needs and abilities.
    a. Collect, duplicate, and distribute examples of the most common style deficiencies based on previously submitted and evaluated student papers.
    b. Teach characteristics of good sentence structure. Assign appropriate exercises from the Warriner's Handbook, Chapter 10 ("Writing Complete Sentences"), pp. 206-219.

c. Teach diction (word choice): Assign appropriate exercises from Warriner's Handbook, Chapter 9 ("Glossary of Usage"); stress avoidance of common dictional errors from student writing, e.g., "its vs. it's"; "their vs. there"; etc.

d. Teach basic comma usage and punctuation of titles and published works (underlining vs. quotation marks); See Chapter 23 and 25 of Warriner's Handbook for related exercises and instruction.

Supplementary material for this course of study for the purpose of assisting the student to increase his self awareness, to make decisions, and to improve his writing skills is included in Career Development Service, Part I and II, listed below in Resources. Each of the lessons in these workbooks can be covered in one day. They are relevant to the students, easy to read and valuable as a basis for group discussion after the students complete the short writing assignments in each lesson. These books may be utilized as separate units of study for Communication II, following the 5 *basic* units of study or interspersed within the basic units; both methods are effective.

D. RESOURCES

Curriculum Innovations, Inc. *Career World: The Continuing Guide to Careers.* Highwood, Illinois, 1975.

Palmer Publications, Inc. *Career Development Service: Part I (Success and You).* Easton, Pennsylvania, 1975. $1.50 per student.

Palmer Publications, Inc. *Career Development Service: (Life and You).* Easton, Pennsylvania, 1975. $1.50 per student.

Warriner, John E. et. al. *English Grammar and Composition.* New York: Harcourt, Brace and World, Inc., 1965.

E. BIBLIOGRAPHY

Kimbrell, Grady and Vineyard, Ben S. *Succeeding in the World of Work.* Bloomington, Illinois: McKnight Publishing Company, 1975.

Terkel, Studs. *Working.* New York, New York: Avon Books, 1975.

F. STUDENT MATERIAL FOR DUPLICATION

a. TEST

(Sample Questions)

1. __________ __________ is the idea of planning for more than one future career or job.
2. (Diction, Narration) ______________ is the act of choosing words correctly in writing.
3. When a job offers several benefits besides salary, that job is said to have good (multiple, fringe) __________ benefits.
4. A group of words which form only *part* of a complete thought but yet written as a sentence is called a ______________ sentence.
5. A paraprofessional worker is one who works ______________ a professional worker and is trained in less ______________.
6. Writing a summary usually involves ________ steps, the first of which is ________ your article carefully.
7. __________ and __________ are two good examples of career areas that require good speaking skills.
8. (Paraphrasing, Summarizing) __________ is the act of putting someone else's words into your own words.
9. ____________ shift is the name for the different kinds of shifts a worker will work from one week to the next on a rotating schedule.
10. When one sentence collides with another without the proper punctuation, someone has then written a ______________ sentence.

b. TEST

(Sample Questions)

1. ____________ and ______________ are two good examples of careers in the paraprofessions.
2. List (4) major sources to look into when researching career or job information.
   1. ______________________________ 3. ______________________________
   2. ______________________________ 4. ______________________________
3. Two keys to "listening to instructions" are to __________ and __________ your instructions carefully.
4. In writing, diction is the act of choosing ______________ accurately.
5. Job (prospects, turnover) ______________ is the word that describes constant changing or giving up of a certain type of work.
6. Titles of books and magazines should be ______________ (underlined, put into quotation marks).
7. A sentence fragment is a group of words that form only __________ of a complete thought.
8. List (3) examples of *fringe benefits* for practically any job.
   1. __________________ 2. __________________ 3. __________________
9. *The Encyclopedia of* __________, __________ *Guidance* and *The Occupational* __________ are three good library books for career research.
10. List (4) ways that good writing skills can be applied to getting a job.
    1. ______________________________ 3. ______________________________
    2. ______________________________ 4. ______________________________

c. GROUP PROJECT
"A New Society"

Situation or predicament:

Following a world-wide nuclear war, ten people are hiding out in a fallout shelter that has survived immediate destruction. If all these people can hold for two months, the radiation level will drop to a safe level and they can then begin to rebuild their society. But there is food and oxygen enough for only (7) of the (10) people. Decide which (3) people will leave the shelter and which (7) will make up the *NEW SOCIETY*.

1. a middle-aged male *writer*
2. a black male musician
3. a pregnant woman who is hysterical
4. her husband
5. a high school girl
6. a scientist
7. a professional football player
8. a 70 year old minister
9. an armed policeman
10. a female singer

THINK before you decide!

GROUP PROJECT
"A New Society"

Procedure:

1. Divide into assigned groups; choose a spokesman for the group.
2. Discuss opinions and suggestions for eliminating (3) of the (10) society members. Do not vote yet.
3. Ask each member of the group to submit his or her (3) names of the society members to be eliminated. Record the results and re-submit names until the whole group agrees (majority wins).
4. Draw up a new list of the new society. After each society member's role, write all the reasons the group gave for INCLUDING each member. Then write all the reasons for eliminating those people who were excluded. Keep the following in mind:
   - A. what is each person's value or function in the NEW SOCIETY
   - B. why that person would be useless (if eliminated)
   - C. what threat or danger might exist (if kept in group)
   - D. how you would *explain* your thinking to the (3) eliminated.
5. Present group opinion to whole class. Spokesman presides; other members offer supporting ideas or suggestions.

d. CAREER RESEARCH ASSIGNMENT

Name ______________________ Occupation researched ______________________

____

Source(s) of information (title of books or articles, author, place and date of publication, where found) ________

____

____

Average salary: ______________________ Average time worked ______________________

Fringe benefits: ______________________

Opportunities for advancement: ______________________

Describe the type of work involved: ______________________

____

____

What are the disadvantages or drawbacks of this job? ______________________

____

Why might this kind of work be suitable to *you*? ______________________

____

____

Other important information: ______________________

____

____

e. QUOTATIONS FOR PARAPHRASING

1. When the well is dry, we know the worth of water.

2. The reward of a thing well done is to have done it.

3. Insist on yourself; never imitate.

4. A friend is a person with whom I may be sincere.

5. A lie stands on one leg, truth on two.

6. Fish and visitors smell in three days.

7. Three may keep a secret if two of them are dead.

COMMUNICATIONS III: READING

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Reading

by Charles May

A. INTRODUCTION

In order to achieve the objectives of the communications segment of the program it is necessary that the student see and experience the practical benefits and pleasures that can be gained from reading, especially in connection with his own life goals and careers.

The specific materials for reading are chosen so that they immediately seize the students' attention, mirror their lives and experience, and have relevant correlations to the career area.

Although specific activities are centered upon certain stories, plays, and poems, these activities may be adapted to other, similar materials. The activities which follow should be used as examples rather than as lesson plans. A story or poetry activity may be extended or shortened, as indicated by the class' enjoyment.

The four text books listed, all anthologies, provide enough stories, plays, poems, and exercises to complete a nine week course of study.

Student evaluation is indicated by a grade or grades for each unit. A Pre/Post test for all 4 Communications courses is given at the beginning and at the end of the year. (See appendices of manual, p. 181.)

B. COURSE OBJECTIVES

1. The student will develop skills in discovering the meanings of words from sentence context.
2. The student will be able to understand main idea, author attitude, and implied meanings in the stories, poems, and plays.
3. The student will reach helpful conclusions about the careers described in the stories, poems, and plays and will be able to identify, from career viewpoints, the problems of the various characters.
4. The students will be able to work together in groups, will be able to recognize the functions and contributions of members and leaders in a group, and will be aware of group dynamics as it pertains to career settings.
5. The student, through role playing activities, will become familiar with the various responsibilities and functions of people in a variety of career situations.
6. The student will be able to write a clear essay and a legible letter, and to answer questions in good sentence form.
7. The student will become aware of the advantages of good, clear spoken diction in the world of work.
8. The student will become aware of the correlation between fulfillment of personal needs and job satisfaction.

C. ACTIVITIES

UNIT 1: WORD DEVELOPMENT

Objective 1: The student will develop skills in discovering the meanings of words from sentence context.

Time line: *3 days.*

Activity 1: In the introduction to a story, play, or poem, the teacher makes a list of several unfamiliar words found in the reading material.

Activity 2: Students are instructed to make a list of any other new words they encounter while reading.

Activity 3: A class discussion is held concerning these words. Suggested contextual meanings of the words are elicited from the students culminating in dictionary reinforcements of the definitions.

UNIT 2: READING COMPREHENSION

Objective 2: The student will be able to understand main ideas, author attitude, and implied meanings in the stories, poems, and plays.

Time line: *3 days.*

Activity 1: The teacher introduces a story in a conceptual manner. An example of the introductory procedure follows, using the story "Runaway Rig" from *Adventure and Suspense.* The teacher begins by asking some or all of the following questions, and initiating a class discussion from student responses.

a. Have you ever been in an automobile accident?
b. Have you ever seen a bad smash-up?
c. Can you imagine being a truck driver and having your brakes fail at the top of a dangerous hill?

The story we are now going to read is about that kind of adventure. It is called *Runaway Rig.*

Activity 2: The class is invited to look at the illustrations and to imagine what the story is like. The teacher may wish to read the opening paragraphs aloud.

Activity 3: The class is then asked to read the story silently.

Activity 4: The class is asked to find the author's point of view and attitude in the story as well as messages, morals, and values that the author is communicating.

Activity 5: Students are asked questions similar to the following:

a. Why is it important to know the author's point of view in the story?
b. What is a moral?
c. What message did the author want to convey through this story?

UNIT 3: ATTITUDES RELATED TO CAREERS

Objective 3: The student will reach helpful conclusions about the careers designed in the stories, poems, and plays and will be able to identify from a career viewpoint, the problems of the various characters.

Time line: *2 days.*

Activity 1: After reading, students are requested to make a list of the character careers mentioned in the story. In *Runaway Rig*, for example, the following are mentioned: Truck Driver, Truck Helper, Mechanic and Patrolman. The skills and rewards of these careers are surveyed, and questions about them are encouraged.

Activity 2: A class discussion ensues related to each of the characters and his or her career in the story. The responsibilities and nature of each career are brought out in discussion, as well as the following questions:

a. Does each character's career help you understand the character? Why?
b. Do the characters portray "typical" members of those career fields? What makes us think they are "typical"?

Activity 3: The students are asked to imagine the main characters in careers different from those portrayed in the story. They are asked to write their own stories based on these characters in different careers.

Activity 4: An evaluation follow-up to the student stories involves a discussion:

a. Does a career help determine what a person is like?
b. Are any of the characters' problems in the story related to their career choices?

UNIT 4: GROUP DYNAMICS IN THE WORLD OF WORK

Objective 4: The students will be able to work together in groups, will be able to recognize the function and contribution of members and leaders in a group, and will be aware of group dynamics as it pertains to career settings.

Time line: *2 days.*

Activity 1: The students are introduced to the idea of group work by indicating the types of operating procedure existing in the world of work: Departmental meetings, Committees, etc.

Activity 2: The class is divided into groups of four people. Each group is given a discussion question about implied meanings or values suggested in the story.

Activity 3: The groups discuss their questions, reach a consensus or split into factions, make decisions and record their progress.

Activity 4: At the end of a specific time period (15-20 minutes) the groups are polled. There are often spirited disagreements between as well as within, groups.

Activity 5: When discussions have ended, the groups evaluate the roles that their members played in the group process. The following questions are posed and answered:

a. Who was the leader?
b. Who was the most vocal?
c. Who was the most stubborn?
d. Who was the best compromiser?

Activity 6: Answers to the above questions lead into an appraisal of varying roles and attitudes in career settings; union leaders, negotiators, mediators, management etc.

UNIT 5: CAREER ROLE PLAYING

Objective 5: The student, through role playing activities, will become familiar with the various responsibilities and functions of people in a variety of career situations.

Time line: *3 days.*

Activity 1: The various ways people are judged by their actions and appearance are discussed with the class.

Activity 2: Two of the more mature, extroverted students are selected by the teacher to go out into the corridor to prepare a skit portraying a conflict between 2 people in different careers (taken from current reading material).

Activity 3: During their absence the rest of the class discusses the value of role-playing to find out the feelings of others and the benefits of such insights in a career setting.

Activity 4: The students come into the room and perform their skit.

Activity 5: Criticism and discussion about the issues in the scene is then encouraged. Other students are invited to participate in this activity.

UNIT 6: WRITING SKILLS

Objective 6: The student will be able to write a clear essay, a legible letter, and will be able to answer questions in good sentence form.

Time line: *5 days.*

Activity 1: After reading an assignment, the students are asked to write an essay concerning the events in the story.

Activity 2: Students are to imagine that they are one of the characters in a story or play under consideration. They are to write a letter to a friend explaining their present concerns in their particular jobs.

Activity 3: The students will write a newspaper article about a fictional character and include a typical day in the working life of the character.

Activity 4: The students are given an opportunity to write letters of recommendation and journal segments relating to themselves and their career considerations.

UNIT 7: ORAL SKILLS

Objective 7: The student will become aware of the advantages of good, clear spoken diction in the world of work.

Time line: *2 days.*

Activity 1: The teacher requests the students to read aloud in class on several occasions. A discussion is held concerning the clarity of diction and good speaking skills that are necessary in the world of work.

Activity 2: Students are asked to list careers that would definitely include excellent speaking skills.

Activity 3: Students are asked to name any careers that would not require good speaking skills.

Activity 4: A role-playing situation is staged to demonstrate what might happen if a potential worker did not speak clearly or understandably.

UNIT 8: CORRELATION OF PERSONAL NEEDS AND JOB SATISFACTION

Objective 8: The student will become aware of the correlation between fulfillment of his personal needs and job satisfaction.

Time line: *15 to 20 days.*

Activity 1: The teacher may initiate a discussion by asking one or more of the following questions:

"Do parents call you immature? What does 'immature' mean? Are you tired of that comment? How do you get to know yourself? Is growing up painful? In what way?"

This discussion is used as a springboard to introduce the workbook of Career Development Service, *Work and You*, Part III, and *The Future & You*, Part IV.

Activity 2: The class reads aloud or silently from the workbook and after discussing important facts and concepts, proceeds to the written exercises.

Activity 3: The workbook exercise which was done previously can be shared on a one-to-one basis, with the class as a whole or kept privately, depending on the nature of the exercise.

Activity 4: The ongoing writing exercises in these excellent workbooks serve as an evaluation of the students' growth in self appraisal and career consciousness.

D. RESOURCES

Texts: Books used in the reading segment of communications portion of Communications and Careers course.

360 Reading Series — Level 14

Ginn and Company, Lexington, Massachusetts, 1973; comprises five large format paperback books entitled: *Awakenings, Speculations, Conflicts, Failures, Changes.* (High interest level, profusely illustrated, varied contents.)

Huyck, M. L., Finch, H. R., (eds.) *Adventure and Suspense, A Scholastic Literature Unit.* Scholastic Book Services, NY, 1973. (Similar to the Ginn books in appeal. Helpful lesson plans and study guides come with this unit.)

Corbiu, Richard. *Currents in Poetry.* MacMillan Publishing Co., New York, 1974.

Success and You I, Life and You II, Work and You III, The Future and You IV. Career Development Service, Easton, PA. 1975. (Valuable teaching aids, practical and fun to use.) $1.50 per student.

Other Resources

How to Be a Better Employee, filmstrips and record; Aware Records and Film Co., Pasadena, California. (Useful in buttressing discussions in this area.)

Poetry . . . Like It or Not by Terry Borton, LP record, guide, poems, Educational Activities, Inc., Freeport, L.I.

Guidance Associates Sound Filmstrips. Harcourt-Brace, Jovanovich, Inc., NY.
"Homes and Lifestyles: The Choice is Yours"
"Making the Most of Your Talents"
"Career Choice: A Lifelong Process"

E. BIBLIOGRAPHY

Brilhart, John, K. *Effective Group Discussion.* Wm. C. Brown Co., Dubuque, Iowa, 1967.

Egan, Gerard. *Encounter: Group Processes for Interpersonal Growth*, Wadsworth Publishing Co., Belmont, California, 1970.

Friedenberg, Edgar Z. *The Vanishing Adolescent.* Dell Publishing Co., NY, 1959.

Koch, Kenneth. *Wishes, Lies, and Dreams, Teaching Children to Write Poetry.* Chelsea House, NY, 1970.

Purves, Alan C. *How Porcupines Make Love.* Xerox College Publishing, Lexington, Massachusetts, 1970.

Simon, Howe, Kirschenbaum. *Values Clarification.* Hart Publishing Co., New York, 1972.

Tanner, Fran A. *Creative Communication Projects in Acting, Speaking, Oral Reading.* Clark Publishing Co., Pocatello, Idaho, 1973.

COMMUNICATIONS IV: ORAL SKILLS

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Oral Skills

by Ellin-Jean Uhl

A. INTRODUCTION

This phase of communication is designed to help the student become familiar with *all* the procedures necessary to succeed in the world of work. Here, special emphasis is placed on oral communications, class discussions, interview techniques, etc.

The course is designed specifically to help the student in two ways: first, to discover some facts about himself and his identity, and second, to narrow the wide range of career choice that fit him individually.

Developing the student's abilities in reading and writing is also an important component of the course since these skills and oral communication are necessary for the individual to function as a productive member of society. Several excellent publications are used as motivational and instructional materials.

The students particularly enjoy *READ*, a high interest, low reading level magazine published monthly. Its numerous stories, plays, and puzzles serve to maintain a high level of interest in the course. This supplemental material is useful for those students who finish assignments before the rest of the class.

Another important resource of the course is *Johnny Tremain* by Esther Forbes, since it develops a background and understanding of apprenticeship and youth employment and stresses the acquisition of learning skills in preparation for future employment. The novel enables students to identify the importance of character development and self-discipline and their correlation to job success. This could be a home assignment or an assigment for extra credit.

The text for this course is *Succeeding In The World Of Work*, by Kimbrell-Vineyard, (McKnight Publishers), especially Chapters I-VI.

The evaluation designed for this course includes the following:

1. A "Pre-test" given at the beginning of the marking period. (See section F, p. 46.)
2. "True-False" quizzes; included in Workbooks.
3. A "Post Test" given at the end of the marking period. (See section F, p. 46.)
4. A Pre/Post test for Communications I, II, III & IV is administered at the beginning and at the end of the year. (See appendices of manual, p. 181.)

In summary, this course presents the world of work as an integral part of life's activity within which each individual must fit. The procedure of successfully attaining a position is detailed, all components of this procedure are covered, and special emphasis is placed upon oral communication skills.

B. COURSE OBJECTIVES

1. Students will be able to make personal decisions in regard to ten basic values: Fame, Money, Power, Religion, Humanism, Family, Health, Aesthetics, Creativity, and Sociability.
2. Students will be able to trace the relationship between hobbies and career choices.
3. The students will be able to identify five major facets of life that appear to make the greatest contributions to happiness in the individual:, family life, friends, leisure activities, activities, moral codes, and career.
4. Students will be able to explain the economic, social, and psychological reasons that cause people to work.

5. Students will be able to explain that the wages a person earns from work are important because they can satisfy the basic needs of hunger, thirst, and shelter.
6. Students will be able to identify a realistic career goal.
7. Students will be able to identify the advantages of attaining a part-time job while in school and its relationship to career goals.
8. Students will be able to identify the fifteen career clusters and many of their subtitles.
9. Students will be able to identify the six common functions of private enterprise.
10. Students will be able to identify the advantages of good planning with regard to job-hunting.
11. Students will be able to fill out correctly forms relating to the world of work.
12. Students will be able to write a letter of application and resumé.
13. Students will be able to recognize those elements necessary to make a favorable impression during an interview.
14. Students will be able to list the seven points that most employers expect from employees.
15. Students will be able to list the ten points that most employees may expect from employers.
16. Students will be able to identify the importance of establishing a good relationship with their co-workers.

C. ACTIVITIES

UNIT 1: DISCUSSION AND INTERPRETATION OF VALUES

Objective 1: Students will be able to make personal decisions in regard to the ten basic values. (Fame, Money, Power, Religion, Humanism, Family, Health, Aesthetics, Creativity and Sociability.)

Time line: *6 days.*

Activity 1: General discussion concerning values.

Activity 2: Read Chapter VI – Succeeding, etc. pp. 83-93.

Activity 3: Students take the "Values Appraisal Scale" test in the Workbook – pp. 85-90. It is important to stress that students be honest in circling their answers.

Activity 4: Students make a chart of their own "Profile of Values" based on the answers given honestly in their test, Workbook p. 91. Students then check the "Values Appraisal Scale Interpretation," p. 92 of Workbook.

Activity 5: Students write a paragraph discussing interesting facts learned from the results of the forementioned test.

Activity 6: On the basis of facts discussed and learned from the previous days' lessons, the class holds a panel discussion on possible career choices with regard to certain data. By doing this students learn how individual personalities can be an asset in certain career choices.

UNIT 2: HOBBIES AND THEIR RELATIONSHIP TO CAREERS

Objective 2: Students will be able to trace the relationship between hobbies and career choices.

Time line: *2 days.*

Activity 1: Various hobbies are listed on the blackboard. Students are encouraged to add to the list. A discussion is then encouraged concerning the relationship of various hobbies to certain career choices.

Activity 2: Students fill out the "Hobby Interests Evaluation," p. 94 of Workbook.

Activity 3: Upon completing this evaluation, students write a short paragraph discussing the possibility of relationships between their own hobbies and some related field of work.

Activity 4: Students are encouraged to discuss with the group some of their hobbies and how these could be an advantage to them in the future.

UNIT 3: PURSUIT OF HAPPINESS

Objective 3: The students will be able to identify the five major facets of life that appear to make the greatest contributions to happiness in the individual: family life, friends, leisure activities, religion, moral code, and career.

Time line: *4 days.*

Activity 1: A discussion is held on the students' established values and their relationship to the "pursuit of happiness," based on material contained in Chapter I, *Succeeding In The World Of Work.*

Activity 2: Students study diagrams of different lifestyles on pages 4 and 5 of text and note the importance of each facet varies from person to person, and that each facet may contribute to the fulfillment of more than one particular need.

Activity 3: Students complete the form on p. 13 of Workbook – "Analyzing Your Happiness Goals."

Activity 4: Students survey three married working adults concerning their "happiness goals and lifestyles."

Activity 5: Class discussion based on student interviews.

UNIT 4: WHY PEOPLE WORK

Objectives 4 & 5: Students will be able to explain the economic, social, and psychological reasons that cause people to work. Students will be able to explain that the wages a person earns from work are important because they can satisfy the basic needs of hunger, thirst, and shelter.

Time line: *3 days.*

Activity 1: Students participate in the reading and the discussion of Chapter 1 in the text – "You and Work."

Activity 2: Students complete the form on p. 15 of the workbook – "Deciding Why Work Is Important."

Activity 3: "Deciding Why Work Is Important" is discussed and shared by the students.

UNIT 5: PART-TIME JOBS

Objective 7: Students will be able to identify the advantages of attaining a part-time job while in school and its relationship to career goals.

Time line: *2 days.*

Activity 1: A discussion is held concerning the benefits of a part-time job and its relationship to future career goals.

Activity 2: Students read *Succeeding In The World Of Work*, pp. 11 – 12.

Activity 3: Students complete and discuss the forms in their workbooks, page 21.

Activity 4: Students who already have jobs discuss with the other class members the advantages of their individual experiences with part-time jobs and relate them to their future career plans.

UNIT 6: REALISTIC CAREER GOALS AND FIFTEEN CAREER CLUSTERS

Objectives 6 & 8: Students will be able to identify a realistic career goal. Students will be able to identify the fifteen career clusters and many of their subtitles.

Time line: *7 days.*

Activity 1: Students read pp. 15 – 22 in *Succeeding*, etc.

Activity 2: Through class discussion, students become familiar with the 15 career clusters and the manner in which jobs are grouped into clusters.

Activity 3: Students complete "Activity 7" on page 23 of the workbook entitled "Career Cluster – Job Preferences."

Activity 4: The students research five job titles pertaining to the "clusters" that most interest them.

Activity 5: Students write an evaluation of the jobs involved within the cluster they have researched. (See section F, Student Material for Duplication, p. 46.)

UNIT 7: PRIVATE ENTERPRISE

Objective 9: Students will be able to identify the six common functions of private enterprise.

Time line: *2 days.*

Activity 1: Students are introduced to the meaning of "private enterprise" and six common functions of every enterprise. (text p. 13) During the discussion, examples of different industries are explored, e.g. General Motors, Shop-Rite, or another large food chain.

Activity 2: Students list three functions which most interest them and write the reasons for their choices.

UNIT 8: SYSTEMATIC APPROACH TO LOCATING JOB VACANCIES

Objective 10: Students will be able to identify the advantages of good planning with regard to job hunting.

Time line: *2 – 3 days.*

Activity 1: Students read pp. 23 – 27 in text.

Activity 2: The value of a systematic approach to locating employment is discussed by the student.

Activity 3: Students assume that it is June of their senior year of high school. They are to collect several "Help Wanted" sections from various newspapers.

Activity 4: They encircle six leads in the paper and prepare for scheduled interviews based on these leads.

Activity 5: On six index cards students place the time and date for the scheduled interview, the newspaper and date from which the information was gathered, and information about the individual company to which they wish to apply.

The students have one week to prepare this assignment as an "Out of class" activity.

Activity 6: Class discussion of homework assignment.

UNIT 9: APPLICATION FORMS

Objective 11: Students will be able to fill out correctly forms relating to world of work.

Time line: *4 days.*

Activity 1: Students read Chapter III, *Succeeding In The World Of Work*, p. 31 to become familiar with the rules applying to the correct methods of filling out application forms.

Activity 2: As a class the students complete a sample "Social Security" form.

Activity 3: Students complete a sample "General Electric" form found in their workbook.

Activity 4: The students role-play entering a personnel office and filling out an application.

Activity 5: The students complete the "Josten, Inc." form in their workbook. They also assume that they have been working for G.E. for two to three years and are now applying to "Josten, Inc." for purpose of advancement.

Activity 6: After these forms have been corrected and returned to the students, they are given a third application form acquired from area companies, e.g. M&M Mars, Inc., Hackettstown, N.J.; and Sandoz, Inc., Hanover, N.J. This serves as a examination for a student grade. They are asked to pretend they have had work experience so that they can complete the "Employment History" section of the form.

UNIT 10: LETTER OF APPLICATION

Objective 12: Students will be able to write a letter of application and resume.

Time line: *4 days.*

Activity 1: Students are informed that on certain occasions a letter of application is the only way of getting a personal interview. Students review helpful suggestions for writing a letter of application and sample letters contained in the text, pp. 35 – 41.

Activity 2: Students construct their own practice letter. This letter is corrected and returned to the student.

Activity 3: The final copy is prepared by the student to which he attaches a "Personal Data" sheet. These in turn are handed in for evaluation.

Activity 4: At this point the student is instructed on the proper method of folding a letter, placing it in an envelope; finally, this is evaluated.

UNIT 11: INTERVIEW

Objective 13: Students will be able to recognize those elements necessary to make a favorable impression during an interview.

Time line: *5 days.*

Activity 1: The importance of the interview is stressed so that the student understands that a person is hired only after he has been interviewed by the employer or the employer's representative. Students read and discuss the preparation for an interview, what to do during the interview, what questions they might expect and the proper time to leave, covered in *Succeeding in the World of Work*, pp. 42 – 47.

Activity 2: Students are asked to compare the "ways of interviewing".

Activity 3: They are exposed to the "most frequently asked questions", and list answers to these questions.

Activity 4: Students play the role of the interviewer and appraise and complete the critique of the applicants, pp. 51 – 55 workbook.

Activity 5: A student is assigned the role of the interviewer while four or five other students take the roles of job applicants. The remaining students in the class listen and watch carefully to see which applicant would most likely be hired.

Activity 6: After the interviews, the class discusses the correct and incorrect behavior shown during the interview.

UNIT 12: WHAT THE EMPLOYER MAY EXPECT

Objective 14: Students will be able to list the seven points that most employers expect from employees.

Time line: *1 day.*

Activity 1: The students become familiar with the qualities an employer expects from each employee: initative; willingness to learn; willingness to follow directions; dependability; enthusiasm; acceptance of criticism; and loyalty. The class reads and discusses pages 52 – 55 in *Succeeding In The World Of Work.*

Activity 2: One student assumes the role of an employer; several assume the roles of employees who abuse various rules. The dissatisfied employer issues a "Memorandum" to all employees explaining why he expects all nine points obeyed.

Activity 3: The class evaluates the "employer's" statements discussing the reasons for the necessity of such action by the employer.

UNIT 13: WHAT THE EMPLOYEE MAY EXPECT

Objective 15: Students will be able to list the ten points that most employees may expect from employers.

Time line: *1 day.*

Activity 1: Just as an employer has the right to expect certain considerations from his employees, the employees may also expect considerations from the employer. The students review the list of considerations in the text, pp. 55 – 56.

Activity 2: Students assume that they are all gainfully employed; they write a paragraph describing the reasons for each of the ten points discussed in class: pay your salary; provide safe working conditions; provide training; introduce you to co-workers; explain policies; rules and regulations; explain changes in your duties; evaluate your work; discipline you if you break rules; encourage an honest relationship.

UNIT 14: CO-WORKER RELATIONSHIP

Objective 16: Students will be able to identify the importance of establishing a good relationship with their co-workers.

Time line: *1 day.*

Activity 1: Students read pages 70 – 72 in the workbook, "case studies" dealing with co-worker's relationship.

Activity 2: They discuss and formulate conclusions on the behavior of the individuals within the stories.

D. RESOURCES

1. "Fair Credit Reporting Act" – Federal Trade Commission, 6th Street and Pennsylvania Avenue; Washington, D.C. – Free.
2. "Don't Be Gypped" – Federal Trade Commission, 6th Street and Pennsylvania Avenue; Washington, D.C. – Free.
3. "Feedback" – New Jersey Department of Education, 225 West State Street, Trenton, New Jersey 08625 – Free.
4. "Cost of Operating an Automobile" – U.S. Department of Transportation, Federal Highway Administration, Office of Highway Planning, Highway Statistic Division, Washington, D.C. 20590.
5. F.D.A. – Fact Sheet – U.S. Department of Health, Education and Welfare, 500 Fisher Lane, Rockville, Md. 20590.
6. Caveat Emptor (15 issues) – Caveat Emptor, 556 U.S. Highway 22, Hillside, N.J. 07205 – $3.95 for 9 months – 6 months bonus.
7. *Introduction to Vocation* – Margaret Blair and Gordan Law, State of New Jersey Department of Education. Individual topics used from this series: Free
   a. "Small Business Cycle"
   b. "Science Engineering Technology Cycle"
   c. "Mini-Cycles for Introduction to Vocations"
   d. "Transportation Cycle"
   e. "Textile Cycle"
   f. "Mechanical Contracting Cycle"
   g. "Health and Environmental Careers Cycle"

Filmstrips:

"Getting Along With Yourself, Eye Gate House, Inc., 146-01 Archer Ave., Jamaica, New York.
"Likes and Dislikes," Eye Gate House, Inc.
"Dropout – Road to Nowhere," Eye Gate House, Inc.
"Preparing for the Jobs of the 70's," Guidance Associates, Pleasantville, New York.
"Preparing for the World of Work," Guidance Associates.
"Values for Teenagers, the Choice is Yours," Guidance Associates.

Kits: *(Some or all of these kits should be found in the school guidance office.)*

Chronicle Occupational Briefs, Vols. 1 and 2, Moravia, New York. Chronicle Guidance Publications, Inc. (in loose-leaf booklet form).
Occupational Exploration Kit, Science Research Associates, Chicago, Illinois.
Widening Occupational Roles Kit, Grades 7 – 9, Science Research Associates.

*Kimbrell, Grady and Ben S. Vineyard, *Succeeding In The World of Work*, Bloomington, Illinois: McKnight & McKnight, 1973. ($7.98) Text for course.

*Kimbrell, Grady and Ben S. Vineyard, *Activities For Succeeding In The World of Work*, Bloomington, Illinois: McKnight & McKnight, 1973. ($1.98) Workbook for course.

Jewett, Arno, A. H. Lass and Margaret Early, *Literature for Life*, Boston, Mass.: Houghton, Mifflin, 1965. ("Johnny Tremaine is included in this book but also may be found in other anthologies.")

*Indicates resources necessary for teaching Communication IV. Additional resources are suggested supplementary materials which effectively with 9th graders in this program.

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Paters, Herman and Hanson, James. *Vocational Guidance and Career Development.* New York: MacMillan and Company, 1966.

Roe, Anne. *The Psychology of Occupations.* New York: John Wiley and Sons, Inc., 1956.

Sifferd, Calvin. *Selecting and Occupation.* Bloomington, Illinois: McKnight and McKnight Publishing Co., 1962.

U.S. Department of Labor. *Dictionary of Occupational Titles.* Vols. 1 and 2, Washington, D.C.: U.S. Government Printing Office, 1965.

Booklets and Pamphlets:

Baan, H.E. and Clary, J.P. *Introduction to Vocations.* Raleigh, North Carolina. North Carolina State of Public Instruction, 1967.

Bolman, Hary and Shertner, Bruce. *My Career Guidebook.* Milwaukee, Wisconsin: Bruce Publishing Co. 1967.

Educational Design Inc. of New York. *How to Get a Job.* Reading, Massachusetts; Addison-Wouley Publishing Co., 1966.

Guide for Developmental Vocational Guidance. Oklahoma. Published by the Oklahoma State Department of Education, 1968.

Lennox, James. *Finding A Job.* New Brunswick, New Jersey: New Jersey State Department of Education, Rutgers Vocational-Technical Curriculum Laboratory, 1971.

Wagner, Rudolph. *Successful Devices in Guidance and Counseling.* Portland, Maine: J. Weston Publisher, 1968.

Films:

"Choosing Your Occupation," Coronet Films, Coronet Publishing, Chicago, Illinois 60601

"The Big Question – Choosing Your Career," Associated Film, 347 Madison Avenue, New York, New York 10017.

F. STUDENT MATERIAL FOR DUPLICATION

The following statements and questions are employed by the students in order to complete their evaluations:

1. The name of job being evaluated.
2. The education needed for the job.
3. The salary.
4. The qualifications needed for the job.
5. The advantages.
6. The disadvantages.
7. The "working conditions."
8. Some of the "duties" of the job.
9. Some of the "related careers."
10. Means of advancement.

TEST

1. Why are so many beginning workers who lose their jobs fired for the same reason?
2. What is a positive attitude?
3. Why is a co-worker relationship important?
4. How would you dress for an interview?
5. What is considered "proper behavior" during an interview?
6. If you were the employer, what type of questions would you ask during an interview?
7. When would you write a letter of application? What is the purpose of the first paragraph?
8. Who do you feel should be responsible for your career choice? Why?
9. Why is it a good idea to have a written list of possible employers?
10. What are several sources of job leads and what are their advantages?
11. What is meant by "if you expect a full day's pay, you must give a full day's work"?

GLOSSARY OF TERMS

1. Humanism
2. Aesthetic
3. Gregaricus
4. Self-esteem
5. Personal data
6. Resume
7. Career Cluster
8. Aptitude
9. Realistic
10. Private enterprise
11. Apprenticeship
12. Attitude
13. Open-mindedness
14. Strike
15. Tact
16. Values
17. Marital status

SECTION 2

CAREERS

INTRODUCTION TO CAREERS

The emphasis in the 9 career courses differs from that in the four communications courses: *exposure*, rather than skill proficiency, is the key phrase in this area. Thus, it is important for the classroom teacher who has previously stressed skill proficiency to change his mode of teaching and stress general exposure to careers.

The purpose of the hands-on aspect of these courses is to offer students a sample of the type of work involved in these related careers. In addition, local field trips, guest speakers, and career films are important components of each course of study.

Upon completion of a course, the student should be able to describe several of the careers included in the cluster, the positive and negative aspects of careers within the cluster, and the training required for these careers. Thus, each course of study provides the student with a broader base for career decision-making.

AGRICULTURE

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Agriculture

by Peter Wulling

A. INTRODUCTION

The word Agriculture today connotes a man bound to the soil, eking out a bare existence by toil. This is a misconception of today's scientific, mechanized, highly diversified agribusiness. In less developed agrarian societies, the percentage of production farmers is high. As mechanization increases, the number of production farmers decreases but the number of ancillary positions increases. These positions usually require higher levels of training and expertise than ordinary farm labor.

The thrust of this 22 day unit is to teach the student that agriculture is the solid base of any society, for as a society develops, the need for food and supplies increases. In modern U.S.A. the consumption of high quality food and fiber is at an all time high and yet the number of production farms is at an all time low. The number of agribusiness, research and development, and agricultural support positions needed is at an all time high.

The future in agriculture jobs is varied and extensive, and agricultural information must be extended to the population in general. Since the consumer and homeowner deals with agricultural terms and supplies daily, an understanding of this basic industry is essential to every citizen.

B. GENERAL COURSE OBJECTIVES

1. The student will define Agriculture in modern terms.
2. The student will identify the types of farming practiced in America today.
3. The student will understand the economic aspects of production farming in "America".
4. The student will define Agribusiness and its position in the total Agriculture picture.
5. The student will understand the scope of Agriculture Research and Development in American Agriculture.
6. The student will become cognizant of the Agricultural job opportunities in America.
7. The student will identify the farmer's role in modern society.
8. The student will experience through hands-on contact in local Agribusiness pursuits.

C. OBJECTIVES AND ACTIVITIES

UNIT 1: INTRODUCTION TO AGRICULTURE

Objective 1: The student will define Agriculture in modern terms.

Time line: *2 days.*

OBJECTIVES

A. Trace the background and growth of Agriculture in time.
B. Trace the background and development of Agriculture in United States.
C. Understand the scope of Agriculture in U.S.
D. Understand the scope of Agriculture in state, (N.J.).
E. Study job opportunities in Agriculture related to educational preparation level:
  1. College
  2. Tech School
  3. High School
F. Chart the future of Agriculture in U.S.

RESOURCES

A. U.S.D.A. Washington, D.C.
B. State College (Rutgers, N.J.)
C. County Agent

ACTIVITIES

A. Teacher lecture
B. U.S.D.A. Bulletin utilized in class

UNIT 2: TYPES OF FARMS IN THE UNITED STATES

Objective 2: The student will identify the types of farming practiced in America today.

Time line: *2 days.*

OBJECTIVES

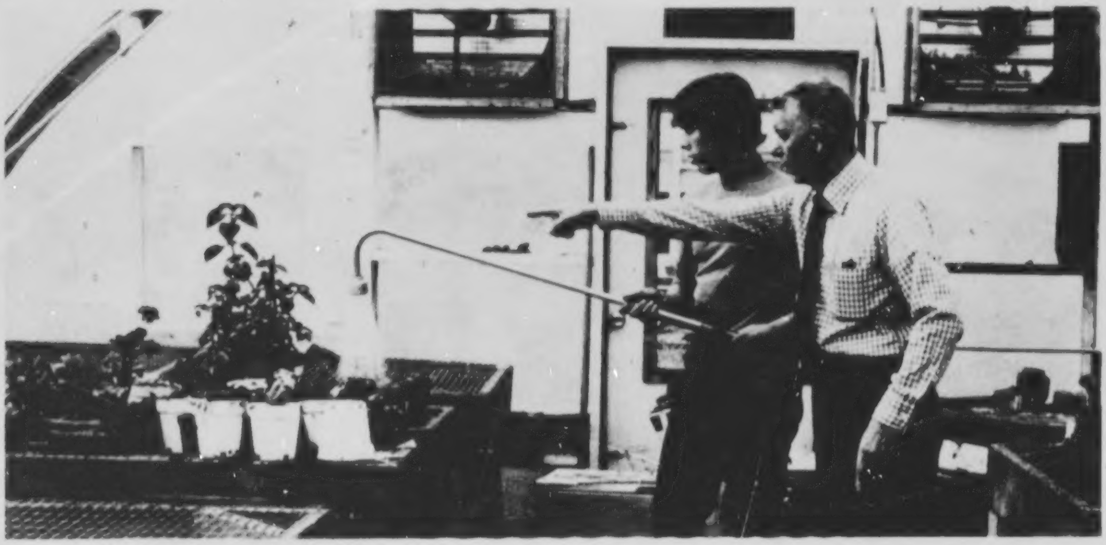
A. Study and understand weather maps of U.S.
B. Correlate crops to weather.
C. Study and understand soil and topographic terrain; correlate to major crops.
D. Determine type of farming in local district.

RESOURCES

A. U.S. Weather Bureau
B. Topographic and physiographic map of U.S.
C. County Agent (Soil maps of Local area).
D. Local Newspaper weather maps.
E. U.S.D.A. Washington, D.C.

ACTIVITIES

A. Use weather, soil, topographic and physiographic maps to determine farming activities.
B. Draw a map of the U.S.; show large general farming regions.
C. Enumerate the major Agriculture regions and their major crops.



UNIT 3: THE ECONOMIC ASPECTS OF PRODUCTION FARMING

Objective 3: The student will understand the economic aspects of production in America.

Time line: *3 days — (2 classes — F. trip).*

OBJECTIVES

A. Determine the scope of population engaged in production agriculture.
B. Study monetary returns of production agriculture.
C. Determine cost (Land, Labor, Capital) for production agriculture.
D. Check local farm costs.

RESOURCES

A. U.S.D.A. yearly report.
B. County Agent
C. State College
D. Local Real Estate dealer
E. Tax Assessor

ACTIVITIES

A. Study charts, graphs, pertinent federal and state figures for costs of Agriculture production.
B. Have Real Estate dealer come in to class and discuss costs of land in local area.
C. Field trip to local farm.

UNIT 4: AGRIBUSINESS ROLE IN AMERICAN LIFE

Objective 4: The student will define Agribusiness and its position in the total Agriculture picture.
Objective 7: The student will identify the farmer's role in modern society.
Objective 8: The student will experience through hands on contact in local Agribusiness pursuits.

Time line: *4 days.*

OBJECTIVES

A. Determine the scope of business enterprises involved in agriculture support or marketing.

RESOURCES

A. John Deere Co. (machine).
B. Merck (pharmaceuticals).
C. Agway (marketing).
D. Local Farmer Cooperation Assn.
E. Local food stores.

ACTIVITIES

A. Visit local Farm Machinery Dealership (or)
B. Have Farm machine company Representative visit classroom.
C. Visit local Agway farm marketing establishment (or)
D. Visit local farm (roadside market)
E. Visit local retail food store.

UNIT 5: THE ROLE OF FARM RESEARCH AND DEVELOPMENT IN AMERICAN AGRICULTURE

Objective 5: The student will understand the scope of Agriculture Research and Development in American Agriculture.

Time line: *4 days.*

OBJECTIVES

A. Determine the scope of research and development in modern American Agriculture.
B. Enumerate the values of research and development.
C. Discuss the negative aspects of new technology, ecology, chemicals in atmosphere, etc.

RESOURCES

A. Ralston Purina Co. (animal feeds)
B. U.S.D.A. Beltsville, Maryland — (prime source of research information).
C. State College (Rutgers, Cornell, Penn. State, etc.) -
D. John Deere Co. (farm machinery development)
E. Food & Drug Administration, Washington, D.C.

ACTIVITIES

A. Visit Land Grant College (Rutgers)
B. Have County Agent into class to explain his role in Modern Day Agriculture.
C. Compile a list of research endeavors related to Agriculture.
D. Determine the Federal Government's role in regulation of new products.

PARTS OF A DAIRY COW
FFA IN THE NEWS

UNIT 6: JOB OPPORTUNITIES IN AMERICAN AGRICULTURE

Objective 6: The student will become cognizant of the Agricultural job opportunities in America.

Time line: *5 days.*

OBJECTIVES

A. Compile a list of Agriculture jobs in United States. Within this list specify:
   1. Educational requirements
   2. Duties of job
   3. Remuneration
B. Understand one Agriculture job in depth.

RESOURCES

A. U.S.D.A. Washington, D.C.
B. County Agent
C. State College

ACTIVITIES

A. Teacher lead discussion
B. Library research
C. Interview with county agent
D. Discussion
E. Composition
F. Writing

D. RESOURCES

1. County Agricultural Agent – located in county seat of every county in the U.S.A., has most updated information from State College of which he is in a faculty status position.
2. U.S. Dept. of Agriculture – Washington, D.C. – a total list of their publications can be obtained by single letter request; very extensive, and a multitude of Agricultural subjects.
3. John Deere Co. – Waterloo, Iowa, extensive farm machinery information available from this large Machinery company.
4. Ford Motor Co. – Dearborne, Michigan – a good resource for farm machinery information.
5. Local Farm Machinery Dealers
6. Local Veterinarian
7. Local Soil Conservation office
8. Agway – local farm supplier for marketing information.
State University – latest research reports and possible guest speakers (can be best arranged through County Agent).
10. Local food markets

E. STUDENT MATERIAL FOR DUPLICATION

INTRODUCTION TO AGRICULTURE

Pre and Post Test

This test is administered on the first day of the course and on the last day of the course in Agriculture.

1. What is Agriculture?
2. What job opportunities exist in American agriculture?
3. What are the educational requirements for various agricultural jobs?
4. Where can one find Agricultural information?
5. How much agricultural background can the average home-owner use?
6. How much agricultural research is done in U.S.A.?
7. Compile a list of production agriculture jobs.
8. Compile a list of the major agricultural regions of U.S. and their related crops.
9. Compile a list of Agriculture related jobs.
10. How important are economic conditions to Agriculture?
11. What is the Federal Governments role in American agriculture?

BUSINESS

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Business

by Irene Urko

A. INTRODUCTION

The Business Careers section introduces various business occupations. Each career is associated with related work experience to enable the students not only to be aware of the duties of the occupations, but also to experience some hands-on activities.

The discovery of new knowledge and the demand for more goods and services are creating new jobs in office occupations each year.

Students may prepare for entry level office occupations by taking a program in their high school which builds a foundation for a career choice. Typing, shorthand, English, basic math, and accounting comprise the basic requirements for office occupations.

Entry level office occupations require a high school education. Jobs of greater responsibility and specialization require additional training and higher education.

B. COURSE OBJECTIVES

1. Given, (100 of each), simple addition, subtraction, multiplication, and division problems, the students will be able to calculate the problems, on paper, within a ten minute time limit for each function with 95% accuracy.
2. Students will calculate addition, subtraction, multiplication, and division problems and master the touch operation by using an adding machine or calculator.
3. Students will be able to explain the job of a bookkeeper and an accountant. Students will be able to explain and prepare an income statement and a balance sheet.
4. Students will be able to define the main job of a receptionist and will be able to speak correctly by following proper telephone etiquette when answering a business telephone.
5. Students will be able to list and identify four clerical jobs: Billing Clerk, Shipping and Receiving Clerk, Payroll Clerk, and Sales Clerk.
6. Students will be able to identify the job of a secretary and decode a shorthand message.
7. Students will be able to identify the jobs of a programmer and systems analyst and will be able to makeup a simple flow chart and write the zone and digit code for a computer punch card.
8. Students will be able to explain the job of a filing clerk and be able to file names in order, following the alphabetic filing rules with 100% accuracy.
9. Students will be able to explain the job of a typist and will be able to type a business letter.
10. Students will list three jobs in the management occupations and define each job: Office Manager, Administrative Assistant and Office Supervisor.

C. UNIT OBJECTIVES AND RELATED ACTIVITIES

UNIT 1: CALCULATIONS

Objective 1: Given, (100 of each), simple addition, substraction, multiplication and division problems, the students will be able to calculate the problems, on paper, within a ten minute time limit for each function with 95% accuracy.

Time line: *5 days.*

Objective 2: The students will be able to calculate addition, subtraction, multiplication, and division problems and master the touch operation by using an adding machine or calculator.
Term to know: home-row key.
Equipment needed: adding machine and calculators.

Teacher makes up dittos of problems for each function.

Activities 1-5
1. teach addition and students practice.
2. teach subtraction and students practice.
3. teach division and students practice.
4. teach multiplication and students practice.
5. test-on all four functions.

Students must be proficient in these skills for entry level positions.

UNIT 2: BOOKKEEPER AND ACCOUNTANT

Objective 3:
- a. Students will be able to explain the job of a bookkeeper and an accountant.
- b. Students will be able to explain and prepare an income statement and a balance sheet.

Time line: *2 days.*

Activity 1: Shown a transparency of a balance sheet the students indicate the proper way of preparing a balance sheet.
Terms to know: Balance sheet — Owner's equity — Assets — Accounting equation — Liabilities.

Activity 2: Given a problem the students prepare a balance sheet. (refer to #1).

Activity 3: Shown a transparency of an income statement the students indicate the proper way of preparing an income statement.
Terms to know: Income statement — Income — Expenses — Net Income.

Activity 4: Given a problem, the students prepare an income statement. (refer to #2).

Activity 5: Movie — Is a Career in Finance/Insurance for you? Followed by a class discussion.

UNIT 3: RECEPTIONIST

Objective 4:
- a. Students will be able to define the main job of a receptionist.
- b. All students will be able to speak correctly by following proper telephone etiquette when answering a business telephone.

Time line: *1 day.*

Activity 1: Students are given a written telephone conversation, and note the proper techniques of a business telephone conversation.
Technique to know: (refer to 3a & 3b) in H.

Activity 2: Students practice the proper telephone techniques with a partner, from a written business telephone conversation. (refer to #4).

Activity 3: Students makeup a business telephone conversation with a partner and demonstrate proper telephone techniques using a demonstration telephone.

Activity 4: Students are able to take and record a telephone message on a form given to them. (refer to #5) in H.
date — time — who called — message — taken by.

UNIT 4: CLERICAL

Objective 5: Students will be able to list and identify four clerical jobs.
billing clerk – shipping and receiving clerk – payroll clerk – sales clerk.

Time line: *3 days.*

Activity 1: The teacher explains the job of a billing clerk and shows the calculation of the terms of an invoice.

Activity 2: The students fill out and calculate the terms of an invoice. (refer to #6).

Activity 3: The teacher explains the job of a shipping and receiving clerk and shows how to fill out and calculate the terms in a purchase order form.

Activity 4: The students fill out and calculate the terms in a purchase order form. (refer to #7).

Activity 5: The teacher discusses the jobs of a payroll clerk and shows how to calculate an employee's weekly earnings.

Activity 6: Given a payroll sheet the students calculate the weekly earnings for each employee. (refer to #8).

Activity 7: The teacher discusses the job of a sales clerk and shows how to fill out and calculate the terms on a sales check.

Activity 8: The students fill out and calculate the terms of a sales check. (refer to #9).

Activity 9: Movie – Is a Clerical Job for you? followed by a class discussion.

Activity 10: Students fill out a supplies requisition form. (refer to #10).

UNIT 5: SECRETARY

Objective 6: Students will be able to identify the job of a secretary and decode a shorthand message.

Time line: *3 days.*

Activity 1: The teacher introduces the job of a secretary and the purpose of shorthand.

Activity 2: The teacher introduces the symbols for a, e, and s. Students practice these three shorthand symbols.

Activity 3: Students practice simple words using symbols a, e, and s.

Activity 4: The teacher introduces the symbols for f and v. Students practice these shorthand symbols.

Activity 5: Students practice simple words using shorthand symbols a, e, s, f, and v.

Activity 6: The teacher introduces the symbols n and m. Students practice n and m.

Activity 7: Students practice words using all shorthand symbols learned.

Activity 8: Students decode simple shorthand messages. Symbols used a, e, s, f, v, m and n.

Activity 9: The teacher introduces symbols t and d. Students practice t and d.

Activity 10: The students decode a shorthand message. Symbols used a, e, s, f, v, m, n, t and d. (refer to #11a and #11b in H)

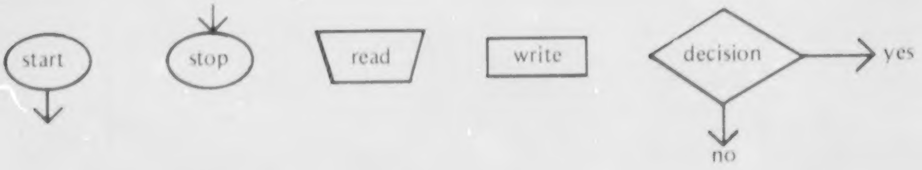
UNIT 6: PROGRAMMER AND SYSTEMS ANALYST

Objective 7: Students will be able to makeup a simple flow chart and write the zone and digit code for a computer punch card.

Time line: *2 days.*

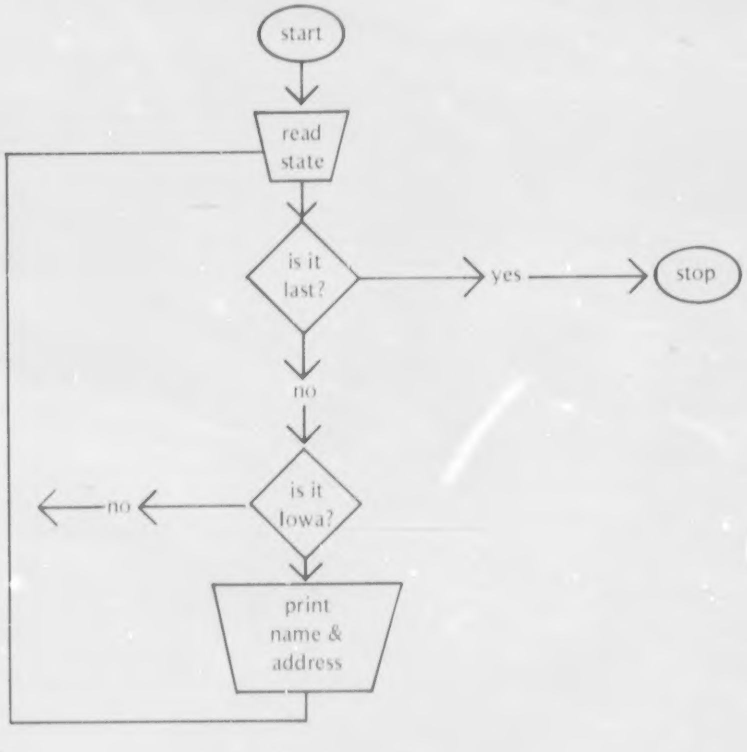
Activity 1: After teacher explanation the students are able to identify five flow chart symbols.
Terms to know: data processing – systems analyst – programmers – flow chart – computer equipment operators – program – flow chart.

Symbols to know:

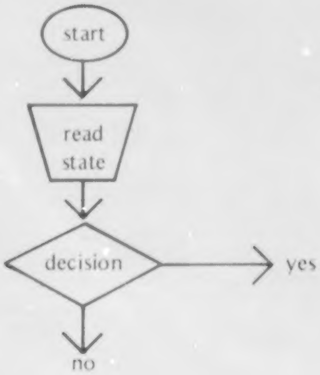

start
stop
read
write
decision
yes
no

Activity 2: After teacher explanation the students are able to make up a simple flow chart.
Example: A computer is given a deck of computer punched cards, make a flow chart asking the computer, to find out if the state is Iowa and to print name and address and to find out if the card is last one of the deck; list instructions needed to stop the system.

flow chart:


start
read
state
is it
last?
yes
stop
no
is it
Iowa?
no
print
name &
address

flow chart for a simple yes or no decision:


start
read state
decision
yes
no

Activity 3: Students are able to write the zone and digit code for each letter on an 80 column computer card. *Terms to know:* An 80 column computer card has 80 vertical columns and 12 horizontal rows.

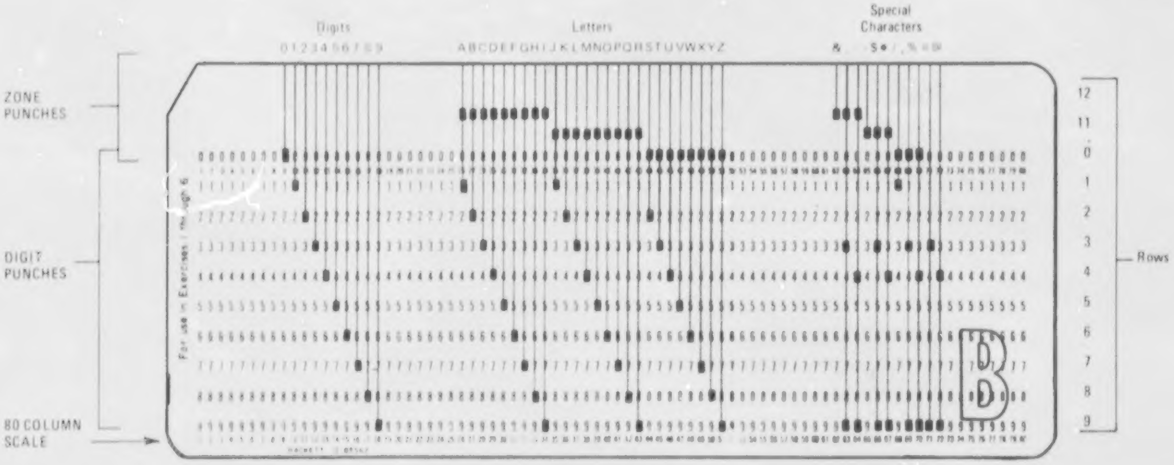
Horizontal rows:

a. Zone punch rows – rows 12, 11 and 0
b. Digit punching rows – rows 0 – 9
c. Alphabetic code for the 80-column punched card – need two punches (zone row and digit row)

Letters	*Zone*	*Digits*
A-I	12	1-9
J-R	11	1-9
S-Z	0	2-9

– use zone rows 12, 11 and 0
– use digit rows 26 – 51

d. Special characters – rows 62 – 72


Digits
0 1 2 3 4 5 6 7 8 9
Letters
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
Special Characters
& $
ZONE PUNCHES
DIGIT PUNCHES
80 COLUMN SCALE
12
11
0
1
2
3
4
5
6
7
8
9
Rows
B

Depending on the information the operator wishes to record, one, two or three punches per column are required.

Activity 4: Students print their name on a line, then on the next line write the zone and digit code for each letter. Example:

J	O	A	N	S	M	I	T	H
11/1	11/6	12/1	11/5	0/2	11/4	12/9	0/3	12/8

Alternate Activity: Movie – Is a Career in Management for You?

UNIT 7: FILE CLERK

Objective 8: Students will be able to explain the job of a filing clerk and be able to file names in order, following the alphabetic filing rules with 100% accuracy.

Time line: *2 days.*

Activity 1: Movie – Filing Procedures in Business

Activity 2: After teacher explanation, students are able to identify indexing orally.

Activity 3: After teacher explanation, the students are able to index 9 different names of people and companies, following the 9 alphabetic filing rules. (refer to #12)

Activity 4: Students index and file 10 groups of names, of people and companies using the 9 filing rules. (refer to #13)

UNIT 8: TYPIST

Objective 9: Students will be able to explain the job of a typist and will be able to type a business letter.

Time line: *5 days.*

Activity 1: After teacher explanation, the students are able to identify the parts of a business letter:
letterhead – dateline – letter address – salutation – body of letter – complimentary closing – writers' identification – reference initials. (refer to #14)

Activity 2: After teacher demonstration of parts of a typewriter the students are able to identify and list the function of each part:
cylinder – spacebar – line guide – paper bail scale – margin sets – backspace – margin release – paper release.

Activity 3: To get acquainted with the typewriter, students type a picture (art typing) from a sheet given to them. (refer to #15)

Activity 4: Shown a transparency of a business letter, the students retype a business letter using the proper margins and spacing.

Activity 5: Students write their own business letter.

Activity 6: Students retype their own business letter using proper margins and spacing.

Activity 7: After teacher demonstration, students type an envelope for their own letter.

Equipment needed – typewriters.

UNIT 9: MANAGEMENT OCCUPATIONS

Objective 10: Students will list 3 jobs in the management occupations and define each job:
office manager – administrative assistant – office supervisor.

Time line: *3 days.*

Activity 1: After teacher explanation, the students are able to explain the job of an office manager.

Activity 2: Office managers are usually responsible for arranging office equipment and furniture so the office looks attractive and work flows smoothly. Students draw a diagram to show how they might re-arrange a room in their school to improve efficiency.

Activity 3: After teacher explanation, the students are able to explain the job of an administrative assistant.

Activity 4: Students interview four students, and ask them if they would prefer school to be in session from (a) 8:00-3:00, (b) 8:30-3:30, or (c) 9:00-4:00. Students give a reason for their preference. The students also prepare a report based on the data collected.

Activity 5: After teacher explanation, the students are able to explain the job of an office supervisor.

Activity 6: Students role play office supervisors and set up a few interviews. After the interview the office supervisor chooses the best person for the job and explains the reason in writing.

D. LIST OF CAREERS IN CLUSTER

DUTIES FOR EACH BUSINESS OCCUPATION

1. accountant – a trained professional generally in the field of financial records, collects and analyzes financial information and prepares financial reports.
2. administrative assistant – gathers and compiles information from various departments of a company.
3. billing clerk – verifies payments due from customers for goods or services; also makes out needed invoices and records payments when they are received.
4. bookkeeper – records details of financial transactions.
5. computer equipment operators – keypunch operator, data typist, verifier operator, tape librarian, console operator.
6. file clerk – gathers, records, sorts according to a system, stores them in a central location, and finds them again when needed.
7. office manager – runs the office efficiently.
8. office supervisor – interviews and hires the best person for the job.
9. payroll clerk – in charge of calculating the weekly earnings for employees of a company.
10. programmer – prepares the formal, step-by-step instructions that guide computer operations.
11. receptionist – answers questions, gives instructions, welcomes callers and receives visitors.
12. sales clerk – sells merchandise in a store.
13. secretary – takes shorthand and transcribes the information on a typewriter.
14. shipping and receiving clerk – handles shipping orders, bills of lading, freight and mail charges, and fills out purchase orders.
15. systems analyst – decides how computers can solve problems.
16. typist – types reports and letters from a written or rough draft copy.

Office jobs require a high school education. Jobs of greater responsibility usually call for additional experience and business training.

E. GLOSSARY OF BUSINESS TERMS

1. accounting equation – assets = liabilities + owner's equity.
2. assets – all items of value owned by a business.
3. balance sheet – a financial statement used to determine the financial condition of a company on a specific day.

4. body of letter – the message the writer is sending.
5. complimentary closing – the parting phrases closing the letter.
6. data processing – storing of information by a computer.
7. date line – tells the reader when the letter was typed.
8. expense – amount a businessman spends to obtain his income.
9. flow chart – a diagram showing what jobs need to be done and in what order on a computer.
10. Gregg shorthand – a pen and paper system of symbols, letters, and words arranged into a language, or code. It speeds up the process of putting down information.
11. home-row keys – on a calculator, the index finger should rest on the "4" key, the middle finger on the "5" key, and the fourth finger on the "6" key.
12. income – amount of money a businessman receives from his customers.
13. income statement – a financial statement used to determine the financial condition of a company for a certain period of time.
14. indexing – arranging a name in the order in which it will be filed.
15. inside address – includes both the full name and the mailing address of the intended reader.
16. invoice – an itemized bill.
17. letterhead – the company's printed name and address. It is the official identification of the writer's company.
18. liabilities – debts, or obligations to pay.
19. net income – profit.
20. owner's equity – a businessman's financial interest in his business.
21. program – step-by-step instructions for the computer.
22. purchase order – a form listing supplies and materials a business needs from an outside supplier.
23. reference initials – identifies the typist.
24. sales check – a form listing items bought by a customer.
25. supplies requisition form – a form used to list items that need to be ordered for office use. Requisition forms are sent to an internal central supply room, or to an office supplies company.
26. writers identification – typed under the space left blank for the writer to sign his name.

F. RESOURCES

Textbooks: *A Career in the Modern Office*, by Phyllis Morrison, Ph.D., Gregg Division/McGraw-Hill Book Co.

Films: Free rentals from the Warren County Film Rentals.
1. Is a Career in Management for You? #MP-2-03397
2. Is a Career in Finance, Insurance for You? #MP-2-04651
3. Is a Career in Clerical Work for You? #MP-2-04653
4. Filing Procedures in Business. #MP-2-0096

Field Trips: Students will visit a near-by company to observe the various types of departments and the jobs performed in each.

Guest speakers from the field of Business.

Equipment: Equipment is utilized from the business department of the high school.

G. BIBLIOGRAPHY

Dame, Patrick and Grubbs, *Exploring Business,* 5th ed. New York: Gregg Division/McGraw-Hill Book Co., 1974.

Kimbrell, Grady. *Introduction of Business and Office Careers,* Illinois: McKnight Publishing Co., 1975.

Morrison, Phyllis. *A Career in the Modern Office,* Book 1, Opportunities in Today's Office; Book 2, Making the Most of Yourself; Book 3, Making the Most of Your Skills; Book 4, Getting the Right Job. New York: Gregg Division/McGraw-Hill Book Co., 1973.

Peterson, Marla. *Exploring Business and Office Occupations,* New York: Gregg Division/McGraw-Hill Book Co., 1974.

Ristan, Robert. *Exploring Clerical Careers,* South-Western, Ohio: Press, 1972.

H. STUDENT MATERIAL FOR DUPLICATION

BALANCE SHEET — #1

Problem: On February 28, 19--, Harold Wilson has the following assets and liabilities — Cash $380, Office Equipment $100, Shop Equipment $200, Tools $500. He owes Allied Mfg. Co. $80, K & S Co. $150, Tyler Supplies $70. Harold Wilson's Capital is $880. Prepare Harold's Balance Sheet.

Answer:

ACE AUTO REPAIR SHOP
Balance Sheet
February 28, 19--

ASSETS		*LIABILITIES*	
Cash	$ 380.00	Accounts Payable:	
Office Equipment	$ 100.00	Allied Mfg. Co.	$ 80.00
Shop Equipment	$ 200.00	K & S Tool Co.	$ 150.00
Tools	$ 500.00	Tyler Supplies	$ 70.00
		Total Liabilities	$ 300.00
		OWNER'S EQUITY	
		H. Wilson, Capital	$ 880.00
Total	$1,180.00	Total	$1,180.00

SAMPLE BALANCE SHEET

SAMPLE INCOME STATEMENT – #2

EVALUATION FORM – OFFICE SITUATIONS – #3A

1. Person Answering a Business Call

Beginning of the Call	**Comments**
1. Answered promptly and pleasantly.	________________
2. Gave proper identification.	________________
Development of the Call	
1. Was attentive; displayed personal interest.	________________
2. Used good judgment in deciding how to handle the situation.	________________
3. Was alert to opportunities to be of assistance (transfer, call-back, message).	________________
4. Volunteered helpful information.	________________
5. Gave explanations effectively.	________________
6. Made inquiries tactfully.	________________
7. Was prepared to take a message.	________________
8. Recorded necessary information carefully.	________________
9. Verified information (spelling, figures, etc.).	________________
10. Used proper techniques when necessary to leave the line.	________________
Closing of the Call	
1. Left a pleasing impression at the close of the call.	________________
2. Was certain that the conversation had been completed before replacing the receiver.	________________
Voice Personality	
1. Spoke distinctly, directly into the mouthpiece.	________________
2. Used correct grammar; avoided using slang.	________________
3. Injected polite expressions (please, thank you).	________________
4. Reflected a friendly, sincere manner.	________________
5. Acted with poise and confidence.	________________
6. Gave the caller a feeling of assurance.	________________
7. Represented the business courteously and efficiently.	________________

EVALUATION FORM – OFFICE SITUATIONS – #3B

2. Person Making a Business Call

Comments

Beginning of the Call

1. Verified the telephone number before calling. ____________
2. Dialed carefully after hearing dial tone. ____________
3. Allowed sufficient ringing time. ____________
4. Gave identification promptly. ____________

Development of the Call

1. Had anticipated points to be covered and was prepared with necessary references. ____________
2. Explained the nature of the call clearly and concisely. ____________
3. Gave information to be recorded slowly and distinctly. ____________
4. Confirmed information to assure mutual understanding. ____________
5. Expressed appreciation. ____________
6. Accomplished the purpose of the call. ____________

Closing of the Call

1. Directed the conversation to a close in a prompt, yet tactful manner. ____________
2. Replaced the receiver gently after closing remarks. ____________

Voice Personality

1. Spoke directly into the mouthpiece, in a distinct voice. ____________
2. Used correct grammar; avoided using slang. ____________
3. Was courteous. ____________
4. Created a pleasing impression. ____________

BUSINESS TELEPHONE CALLS – #4

1. Answering in an Unfamiliar Situation

Susan: Mr. Martin's office, Miss Collins.

Mr. Bailey: May I speak to Mr. Martin?

Susan: I'm sorry. Mr. Martin is dictating now. May I take a message?

Mr. Bailey: This is Charles Bailey. I'd like to see Mr. Martin this afternoon. Do you know if he will be there?

Susan: No, sir – I don't. Mr. Martin's secretary, Miss Williams, is away from her desk now. May I have her call you?

Mr. Bailey: No, thank you. I'd rather call Mr. Martin later this morning. Good-bye.

Susan: You're welcome. Good-bye.

2. Screening a Call

Mary: Mr. Martin's office, Miss Williams.
Mr. Bailey: Mr. Martin, please.
Mary: May I ask who is calling, please?
Mr. Bailey: This is Charles Bailey.
Mary: Oh, yes, Mr. Bailey. Miss Collins told me that you called earlier. May I help you?
Mr. Bailey: Well – I'd like to speak to Mr. Martin.
Mary: I'm sorry. He is not available just now. Is there something I can do to help you?
Mr. Bailey: I want to come over and talk to him about the Chamber of Commerce membership drive. Will he be in the office around 3 this afternoon?
Mary: Yes, I believe he will. I'll make the appointment for 3 o'clock. If Mr. Martin has made some plans which I don't have recorded, I'll call you back. Where may I reach you?
Mr. Bailey: My number is 555-6685. I'll be here for the next hour.
Mary: That's 555-6685. I'll definitely know by then.
Mr. Bailey: Thank you. Good-bye.
Mary: Good-bye.

TELEPHONE MESSAGE – #5

Telephone Message

Date ______________________________
Time ______________________________
From ______________________________
Message ___________________________
____
____
____
____
____
____
____
Taken By __________________________

INVOICE – #6

AKRON OFFICE SUPPLIES

1234 Main Street
Akron, OH 44034

Invoice No. *4114*

To: *Bateman's Dept. Store*
710 S. Main St.
Akron, Ohio 44300

Date: *5/7/—*
Purchase Order No.: *9241*
Shipped Via: *Express*

Quantity	Description	Unit Price	Amount
1 box	*No. 20B Staples*	*1.75*	*1.75*
1 gross	*No. 2 Pencils*	*3.50*	*3.50*
3 boxes	*Letter-size Manila Folders*	*1.85*	*5.55*
5 boxes	*Letterex*	*1.35*	*6.75*
	Amount Due		*17.55*
	5% Sales Tax		*.88*
	Total Amount Due		*$18.43*

Directions: Fill out the invoice

To — Bateman's Dept. Store, 710 S. Main St., Akron, OH 44300. Use current date. Purchase Order is 9241, to be shipped via express. Items to be ordered:

1 box of No. 20B staples at $1.75 a box
1 gross of No. 2 pencils at $3.50 a gross
3 boxes of letter-size manila folders at $1.85 a box
5 boxes of Letterex at $1.35 a box

PURCHASE ORDER – #7

Complete the purchase order below for the following materials:

2 steel file cabinets #S19, gray, $45.00 each; 1 steel desk AB18, brown, $210; 1 steel desk chair AB19, brown, $79.25. Mr. Alfred C. Gray, purchasing agent, has directed that these items be purchased from Hackettstown Supply Company, 1234 Main Street, Hackettstown, New Jersey 97304, and shipped via express. The sales tax is 5 percent. Use the current date.

PURCHASE ORDER NO. 9242

From: Bateman's Department Store, 710 Main St., Akron, Ohio 44300

Date: ______________________

To:

Ship via

Quantity	Description	Unit Price	Amount

Purchasing Agent ____

PAYROLL FORM – #8

At the Office Services Corporation, temporary office employees are paid at an hourly rate. Each employee's hourly rate depends on the type of work he is hired to do. A file clerk, for example, may be paid $2.00 to $2.60 an hour. A typist may be paid $2.20 to $3.50 an hour.

Part of a payroll form is shown below. Find the weekly earnings for the temporary employees listed on the form. Then multiply the total hours by the employee's pay rate to find his weekly earnings. Show your work below the form.

OFFICE SERVICES CORPORATION

Week Ended *Current Week*

Employee	M	T	W	Th	F	Total Hours	Pay Rate	Total Earnings
Judith Bittel	8	7½	8	8¼	8	*39¾*	$2.35	*$ 93.40*
Thomas L. Dravo	6½	8	7½	8	8½	*38½*	2.40	*92.40*
Eileen Fredericks	7	7	7	7	8	*36*	3.20	*115.20*
Mary Alice Fox	7½	8	8½	8	8	*40*	2.20	*88.00*
Anthony E. Grosso	8	8	8	8	7½	*39½*	3.00	*118.50*
Alice Jerrico	7¼	7½	8	8	7	*37¾*	1.90	*71.72*
Kim Lee	7	8	7¼	8	8	*38*	2.35	*89.88*
Marsha McCauley	6½	6½	6½	6½	6½	*32½*	2.20	*71.50*
Raul Serrano	8	8	8	7	8	*39*	2.80	*109.20*

SALES CHECK – #9

MARKS BROS.

Stationery • Office Supplies
42 Greenwich Avenue
Greenwich, Connecticut 40364

Date *5/7/—*

M*r. William Foster*

Address *249 Riverview Rd.*

2	*Pads paper at $0.59 each*	*1*	*18*
1	*Notebook*	*1*	*49*
2	*Pens at $0.29 each*		*58*
4	*Pencils at $0.05 each*		*20*
2	*Erasers at 2 for $0.05 e*		*10*
1	*Sharpener*		*10*
		3	*60*
	5% sales tax		*18*
	Total	*$3*	*78*

A customer bought the following items – please list them on the sales check:

2 pads paper at $0.59 each, 1 notebook at $1.49, 2 pens at $0.29 each, 4 pencils at $0.05 each, 2 erasers at 2 for $0.05, and 1 sharpener at $0.10. Sales tax is 5 percent. Customer's name and address – Mr. William Foster, 249 Riverview Road. Use current date.

OFFICE SUPPLIES REQUISITION – #10

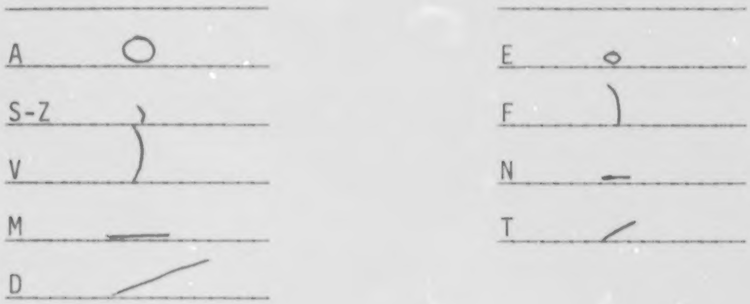
Office Supplies Requisition

Send to ______________________________

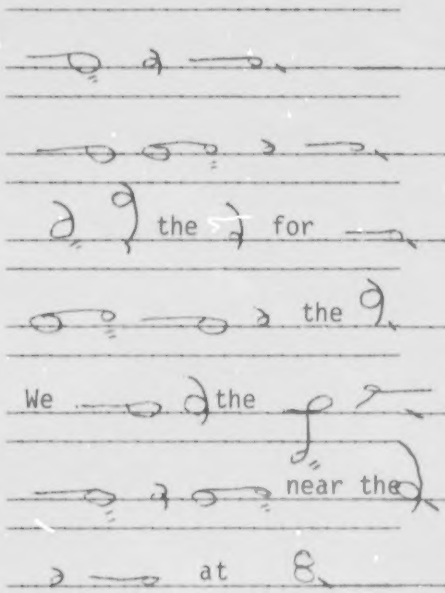
Location ______________________________

Quantity	Item
Date Requested	______________________________

SHORTHAND – #11A


A
S-Z
V
M
D
E
F
N
T

Decoding Messages


the
for
the
We
the
near the
at
8

1. May sees me.

2. May Amy see me.

3. Fay saves the fees for me.

4. Amy may see the safe.

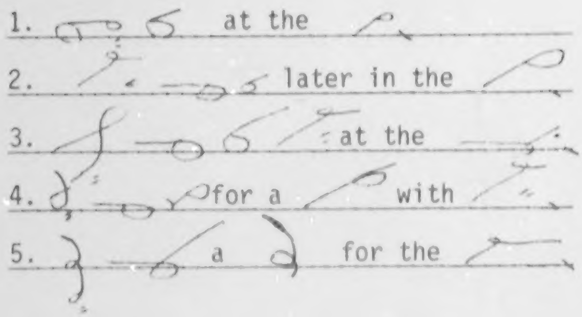
5. We may face the Navy team.

6. May sees Amy near the vase.

7. See me at 8.

SHORTHAND – #11B

Decoding messages


1. at the
2. later in the
3. at the
4. for a with
5. a for the

Amy ate at the tea.

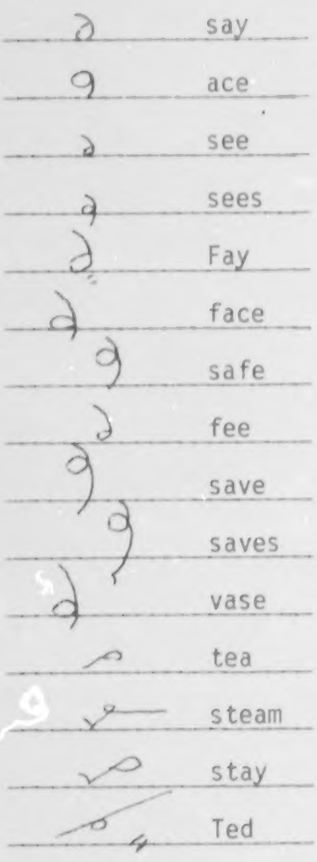
Dean may eat later in the day.

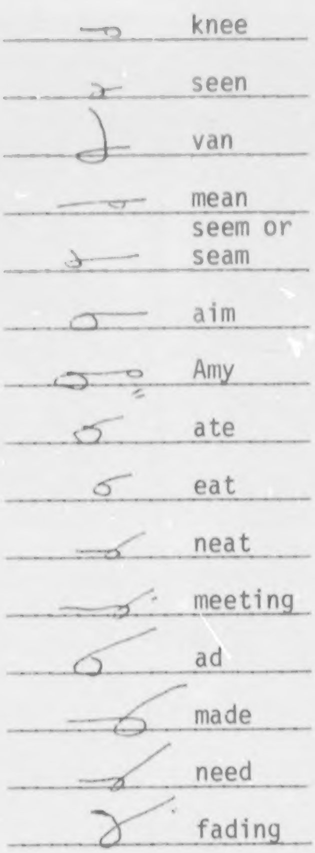
Dave may aid Dean at the meeting.

Fay may stay for a date with Dean.

Fifi made a vase for the team.

Decode


say
ace
see
sees
Fay
face
safe
fee
save
saves
vase
tea
steam
stay
Ted


knee
seen
van
mean
seem or seam
aim
Amy
ate
eat
neat
meeting
ad
made
need
fading

= means capitalize

. means ing

FILING RULES – #12

Indexing – arranging a name in the order in which it will be filed.

1. Personal names – first name & surname (last name) = surname/first name
   example: John Jones = Jones/John
2. Nothing is filed before something
   example: 1. Bern
   2. Berne
3. Personal names with initials – initials & surname = surname/initial
   example: J. Jones = Jones/J.
4. Names with titles and degrees – titles and degrees are indexed at the end.
   example: Mrs. Mary Smith = Smith/Mary/Mrs.
5. Names with religious and foreign titles – titles, religious and foreign titles, when used with one name, are indexed at the beginning.
   example: Brother Jones = Brother/Jones
   King James = King/James
6. Names with prefixes – a prefix, or a word which begins a surname is treated as part of the surname.
7. Company names – index as written.
   example: General Motors Inc. = General/Motors/Inc.
8. Company names with full names of person – index name of person as usual, and then the rest of the company name.
   example: John Jones Toy Company = Jones/John/Toy/Company
9. Names with possessive "s"
   a. "s" after the apostrophe – 's is considered when indexing and alphabetizing.
   b. "s" before the apostrophe – s' is considered when indexing and alphabetizing.
   example a: Sally's Dress Shop = Sally/Dress/Shop
   b: Sallys' Dress Shop = Sallys'/Dress/Shop

FILING PROBLEMS – #13

Index and alphabetize each group of names.

1. Robert Bellamy Linda Smith Robert Ashley Joseph Nichols Mary Marsh John Barney
   Billy Mitchell Carl Young Fred Clark
2. George Bickford Elaine Collier Clara Venturi May Gosling Richard Graves Frank Reed
   James Daley Michael Johnson Peter Loring Mary Downing
3. D. Robbins G. Silver C. Edward Williams Harold Archer John Edward June Bard
   Jayne Sharp Gary Cooper Gale Edwards William C. Juhl
4. Brother Fielding Sister Patricia Miss Jane Reilly Queen Elizabeth Father Connery
   Dr. Joseph Kassal Sen. Arthur Holmes John M. Warner
5. Laura Nyro James Seals Dash Crofts Peter Nero James Taylor Cat Stevens Carly Simon
   Jim Croce John Lennon Paul McCartney
6. James MacFarlane Edward J. McNamara Peter De Gaull Barry DeRosa Joseph DiMaggio
   Brandon De Wilde Ray McMahon Tom DeFerro Marion McParland Bill McCambridge
7. Cobbs' Coffee Shop Carrol's Restaurant Leighton's Market Sherman's Sample Bags
   Hall's Paper Products Scott's Belts Henry's Sport Shoe Store Weber's Furniture
   O'Brien's Stationery Plumber's Supplies

8. Judy Garland Marilyn Monroe Donn Knotts George Peppard Mary Tyler Moore John Wayne
Bobby Vinton Humphrey Bogart Groucho Marx Archie Bunker

[illegible] Shepard Tax Service
Wyman Insurance Co.
Scavone Bus Lines, Inc.
Oliver Industrial Co.
Gill Engineering Co.
Jorday Dept. Store
Liveri Industrial Co.
Expert Auto Repair Co.
Callaham Machine Co.

10. Carson Advertising Agency
Kilduff Steamship Lines, Inc.
Premium Food Stores, Inc.
Pierce Food Products Co.
Campbell Nursing Service
Magnusson Publishing Co.
Campare Importing Co.
Clark Television Repair Co.

11. Alan Wall Construction Co.
Henry Wannamaker Shoe Co.
Philip Sharp Steel Co.
Glenn Bell Co.
Jim Fitzpatrick Sons Co.
George Jenkins Insurance Co.
Bert Mercer Music Co.
Philip Sharp Printing Co.
Cliff Roberts Co.
John Glovers Export Co.

12. Carly Simon Jane C. Smith Sallys' Coffee Shop Sally's Dress Shop M & M Co.
Hackettstown Fish Hatchery John Smith Products Co.

SAMPLE BUSINESS LETTER — #14

CAPLA
PUBLICATIONS, INC. 1. Letterhead

18 Overlook Avenue
Rochelle Park, New Jersey 07662

Telephone: 201-845-3663

line 13 at center → May 15, 1976 2. Dateline

↓ *5 lines down*

3. Letter address
Mr. John Smith
The Smith Publishing Co.
2454 Ocean Ave.
San Diego, CA 10022

↓ *2 lines down*

4. Salutation Dear Mr. Smith:

5. Body of letter

I have just learned that your organization publishes a letter-writing booklet that has been used with success in the business world.

Please send me one of these booklets and bill me at the address shown above for the cost of the booklet and any mailing charges. Thank you.

6. Complimentary closing Very truly yours,

↓ *5 lines down at center*

7. Writer's identification Mr. George Jones

8. Reference initials GJ/id

PARTS OF A BUSINESS LETTER

Margins:	elite typewriter	30 & 70,	Tab stop:	elite	50
	pica typewriter	22 & 62,		pica	42

ART TYPING – #15

Vertical Placement: down 18 spaces from top edge of paper.
Horizontal Placement: 60 space line, margins: elite typewriter – 20 & 80
pica typewriter – 12 & 72

Line

1. 36sp 1X
2. 35sp 3X
3. 35sp 4X
4. 35sp 4X
5. 35sp 4X
6. 35sp 4X
7. 36sp 2X
8. 32sp 1X
9. 32sp 1X
10. 32sp 3X
11. 32sp 4X
12. 32sp 7X
13. 32sp 10X
14. 31sp 11X

Line

15. 31sp 11X
16. 32sp 10X
17. 32sp 9X
18. 8sp 8X 16sp 9X
19. 5sp 14X 13sp 9X
20. 2sp 6X 9sp 5X 9sp 11X
21. 1sp 4X 15sp 3X 7sp 13X
22. 4X 18sp 3X 6sp 11X
23. 3X 21sp 3X 5sp 9X
24. 1sp 4X 2sp 3X 16sp 3X 3sp 9X
25. 2sp 7X 3sp 48X
26. 3sp 4X 13sp 32X
27. 21sp 30X
28. 22sp 28X

PRE AND POST TEST – #16

Directions: Match the following terms with the meanings listed below. Use the proper letter in the space provided.

S 1. Administrative Assistant
P 2. Typist
J 3. Data Processing
A 4. Sales Clerk
B 5. Balance Sheet
F 6. Payroll Clerk
H 7. Receptionist
C 8. Secretary
D 9. Income Statement
R 10. Computer Equipment Operators

T 11. Bookkeeper
Q 12. Office Supervisor
E 13. Accountant
G 14. Billing Clerk
N 15. Office Manager
O 16. Filing Clerk
K 17. Programmer
I 18. Shipping and Receiving Clerk
L 19. Systems Analyst
M 20. Flow Chart

A. Person who sells merchandise in a store.
B. Financial statement used to determine the financial condition of a company on a specific day.
C. Person who takes shorthand and transcribes the information on a typewriter.
D. Financial statement used to determine the financial condition of a company for a certain period of time. (one month)
E. Professional person who collects and analyzes financial information and prepares financial reports.
F. Person in charge of calculating the weekly earnings for employees of a company.
G. Person usually in charge of filling out an invoice.
H. Person who answers questions, gives instructions, welcomes callers and receives visitors.
I. Person usually in charge of filling out a purchase order form.
J. The storing or processing of information by a computer.
K. Person who prepares the formal, step-by-step instructions that guide the computer operations.
L. Person who decides how computers can solve problems.
M. A diagram showing what jobs need to be done and in what order.
N. Person who runs the office efficiently.
O. Person who gathers records, sorts according to a system, stores them in a central location, and finds them again when needed.
P. Person responsible for typing reports and letters from a written or rough draft copy.
Q. Person who interviews and hires the best person for the job.
R. People who work as keypunch operators, data typists, verifier operators, tape librarians and console operators.
S. Person who gathers and compiles information from various departments of a company.
T. Person who records details of financial transactions.

CAREER GUIDANCE

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Career Guidance

by V. A. Fraleigh

A. INTRODUCTION

The Career Guidance unit of the program offers the student a global view of the world of work. He will become more aware of the multitude of careers available to him; the diversified qualifications for these careers; and his own interests and abilities and their relationship to career choices. Self evaluation precedes even tentative career goal selection.

The word *tentative* must be stressed since the goal of the program is not to lock the student into bondage to any one career but rather to give him the necessary information and tools to choose a realistic future goal for himself and start preparing for that goal. Although an individual may change career goals at any time, yet to do so he must be aware of the available alternate choices and the requirements needed to achieve his goal. In essence, the student should know who he is and where he is going.

This course should be taught by an experienced guidance counselor who has some prior knowledge of job entry level skills, apprenticeship programs, technical programs, and two and four-year college programs.

The course is divided into three segments with corresponding objectives and activities for each: Occupational Information, Components of Goal Selection, and the Correlation of Self Knowledge to Career Choice.

B. COURSE OBJECTIVES

1. All students will demonstrate a 50% increase in their awareness of occupational information as exhibited by the increase in their scores from pre to post-test in the instrument "*Box Scores*".
2. All students will exhibit a 50% increase in their knowledge of the components of goal selection, as exhibited by the increase in their scores from pre to post-test in the instrument *Career Education Survey*.
3. All students will make 10th grade course selections and tentative career decisions based upon their increased knowledge of their own interests and abilities and its correlation to career choice.

C. ACTIVITIES

UNIT 1: OCCUPATIONAL AWARENESS

Objective 1: All students will demonstrate a 50% increase in their awareness of occupational information as exhibited by the increase in their scores from pre to post-test in the instrument "*Box Scores*".

Time line: *5 days.*

The counselor briefly introduces the course objectives and indicates that the next few days will be spent on activities to accomplish objective one. (20 minutes)

Before administering "*Box Scores*", the counselor explains the purpose of the pre-test. The students are informed that they are not expected to know many of the answers, and that part of their final grade will be computed on the amount of growth exhibited by an increased knowledge in their post-test score over their pre-test score at the end of the 22 day cycle.

Activity 1: Students take "*Box Scores*". (See p. 92.)

Time: *20 minutes.*

Preparation for Activity 2

The counselor should hand score the pre-tests before returning them to the students. The students should not score their own tests nor exchange with another student.

Return corrected tests to students.

Activity 2: Have students volunteer to read aloud each question and the correct answer. The counselor should not stress the details in an answer, e.g. – *Exactly* how many women are working, how many government employees work for the federal government.

The elements in the test to be stressed are the concepts that are implied, e.g. – Most women, regardless of their marital status, work more than 25 years in their lifetime; therefore, women should prepare as diligently for a career as do men.

Many of these questions form the basis for group discussions.

Activity 3: Discussions: 1) There are no male or female careers; 2) Child rearing does not exclude women from other careers; 3) Alternate life styles; 4) Why do women or men work; 5) Interests; 6) Job satisfaction; 7) Economic survival; 8) Economic affluence; 9) Longevity; 10) Passé roles, etc.

Example: The question on the salary of a tool and die maker is an excellent basis for alternate styles of education, apprenticeship programs, technical training, and the now out-dated belief that a traditional four-year college education is the only door to success.

Many of the test questions can be reviewed rapidly while others may be used for discussion purposes. This is decided at the discretion of the counselor, in accordance with the interest of the students. Students should be encouraged to ask additional questions related to the question or discussion.

Time line: *2–3 days.*

Activity 4: Post-test of *"Box Scores"*

Time line: *30 minutes.*

The post-test should be given at the end of the 22 day cycle since occupational awareness will be touched on in the other two segments of the course.

UNIT 2: COMPONENTS OF GOAL SELECTION

Objective 2: All students will exhibit a 50% increase in their knowledge of the components of goal selection, as exhibited by the increase in their scores from pre to post-test in the instrument *Career Education Survey.*

Time line: *6 days.*

The counselor briefly indicates that many factors are involved in making a career decision and the next few days will be spent in exploring these factors.

Activity 1: Administer the *Career Education Survey.* (See p. 99.)

Time: *1 day.*

Preparation for Activity 2

Correct survey.

Activity 2: The students read and discuss the answers to the test. The same procedure should be followed as in *"Box Scores".*

An initial discussion of the definitions of the following words is helpful: career, job, values, goals, life style, occupation, interests, abilities.

Time line: *2–3 days.*

Activity 3: Film or tape. In order to vary the questions, answer, discussion format, a film or slide presentation to enforce the previous areas is suggested at this time or preferably after one day of discussion.

Time line: *1 day.*

Suggestions:

1. "Career Awareness Series" – Guidance Associates
2. Film on values: "The Choice is Yours" – Guidance Associates

Activity 4: Post-test of *Career Education Survey*

Time: *1 day.*

This post-test should also be given at the end of the cycle since much of the materials covered will be reinforced in segment 3 of the course.

UNIT 3: CORRELATION OF SELF KNOWLEDGE TO CAREER CHOICE

Objective 3: All students will make 10th grade course selections and tentative career decisions based upon their increased knowledge of their own interest and abilities and its correlation to career choice.

Time line: *11 days.*

Activity 1: Students take the "Know Yourself Student Inventory". (See p. 95.)

Time: *1 day.*

Although some of the questions have been covered previously, these questions are geared more to the individual and some repetition is valuable.

Preparation for Activity 2

Correct student tests.

Activity 2: Discussion of the purpose of an inventory, with particular stress on questions 16, 22, and 23 – Personality traits and their relationship to career choice and job success.

Give students "Personality Trait Checklist" to be done at home. This is to be kept by student as a means of assessing his abilities, interests, personality and behavior with a view towards choosing his future career and assessing his potential strengths and weaknesses in the job market. (See p. 98.)

Time line: *1 day.*

Activity 3: This is the optimum time to bring in the Job Placement Counselor, Cooperative Industrial Education, Distributive Education, Cooperative Office Education coordinators or a personnel counselor from industry. The guest speaker should stress the practical applications of what the student has recently learned.

What is the employer looking for in an employee?

Why are some people hired and others rejected?

Skills, attitude, personality: Why are some individuals fired? Absenteeism, lateness, laziness, poor attitude, failure to take orders and inability to get along with co-workers are the major reasons for loss of employment.

Once the individual is hired, job loss results not from lack of ability, but usually from the abovementioned reasons.

Up until this point the student has been exposed to theory. Your guest speaker should be someone who deals daily in the market place.

Activity 4: Students take the Kuder Interest Inventory – Form E. (See p. 92.)

Time line: *2 days.*

Activity 5: Discussion of the ten interest areas of the Kuder and the careers that correlate with the interest areas. Be sure to point out that a *combination* of high interest areas are indicative of particular careers.

Time line: *1 day.*

The counselors manual and supplementary materials are included and prove very helpful in this area.

Activity 6: Students correct and graph the Kuder.

Time line: *1 day.*

Since the Kuder is a tedious inventory for students to take, it is urged that another activity be planned at this time to eliminate the danger of students stabbing their peers with the test pins in attempts to relieve the monotony.

Activity 7: *Suggestions:*

1. A field trip to an area that is not covered in another cluster.
2. Film or tape – see resources.
3. Guest Speaker – Armed Services Recruiter.
4. Major field trip or assembly for all students.

Time line: *1 day.*

Activity 8: Students research careers compatible with their interests and write a report on at least one career using Guide for Study of an Occupation (see p. 94). In addition to their interest graph, they should utilize their "Know Yourself Student Inventory".

The Occupational Exploration Kit (OEK – see p. 92) will supply most of this information. Additional information may be gained from the school library, guidance office, and interviews with someone in this occupation.

Time line: *1–2 days.* (2 days are necessary if all research is done in class time).

This is a written assignment and the format for studying an occupation should be followed closely.

Suggestion for using the OEK:

Directions for using the OEK in conjunction with the Kuder activity 3, 4, 5, should be given before the students have finished the inventory. In this way the students may use the OEK as they finish the inventory so that all of the students will not utilize the box at the same time. When the student uses the interest transparency over the master sheet he should copy down the numbers of the careers within his interest area. In this way the transparency may be utilized by another student while the first student is locating the career description cards in which he is interested.

A student may have 30 numbers relating to careers in his interest area. Rather than pull all 30 cards, he should view the title of the career and pull it only if it is new to him or of potential interest.

Activity 9: Students give an oral report on the career that they have researched. This is an excellent way for students to become more aware of existing occupations.

Time line: *2 days.*

Activity 10: Students are given a course selection for the 10th grade and are asked to choose courses for the following year, compatible with their interests and tentative career choices. This is an excellent opportunity for the counselor to review with the group the various course descriptions, necessity of pre-requisites for some courses and programs, electives that are compatible with career interests, and all aspects of scheduling.

Activity 11: Each student should see a counselor *privately* so that he may discuss freely how he sees himself, his course choice, and his future goals. At this time the counselor must consider the student's abilities, and interests, before scheduling him. This activity can take place during a study hall or any scheduled time rather than class time.

The students going through the cycle in the first ¾ of the year will go through the same process, but their schedule will be a tentative one to be reviewed in the spring of the year before making it a final choice.

D. RESOURCES

Resources necessary to the course are starred (*). Other materials are supplementary and frequently available in the guidance offices.

Books:

1. *Dictionary of Occupational Titles,* U.S. Department of Labor, Vol. I and II. $20.00.
2. *Encyclopedia of Careers and Vocational Guidance,* Hopke, William, Doubleday and Co., Garden City, New York, Vols. I and II. $18.75.
3. *Occupational Outlook Handbook,* U.S. Department of Labor, Supt. of Doc., U.S. Government Printing Office, Washington, D.C. 20402. $6.85.
4. *Chronicle Occupational Briefs,* Chronicle Guidance Publications, Moravia, New York, Vol. I and II. Complete $115.00.

*5. *Occupational Exploration Kit* and *Career Information Kit,* both by Science Research Associates, Chicago, Illinois. Complete $135.00.

*6. Kuder General Interest Inventory, Form E. $59.00 per 100.

*7. Boxscores, Series A and B, Chronicle Guidance Publication, Inc. Moravia, New York, 13118. $32.00 for 200.

Films:

1. "Preparing for the Jobs of the 70's", Guidance Associates, Pleasantville, New York. $41.50.
2. "The Choice is Yours", Guidance Associates, Pleasantville, New York, values for teenagers. $41.50.
3. "Career Values – What Matters?" values for teenagers. $41.50.
4. Filmstrips on Careers (1 set of 8 films), Guidance Associates, 757 Third Avenue, New York, New York. (They may also be purchased individually.)

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F. STUDENT MATERIAL FOR DUPLICATION

1. GUIDE FOR STUDY OF AN OCCUPATION

I. Title Page
  A. Career Cluster
  B. Name of Student
  C. Teacher
  D. Date

II. Table of Contents

III. Outline of a Typical Day's Work
  A. Occupation
  B. Duties

IV. Requirements for Entering the Occupation
  A. Education and Training Length of Time
  B. Where it Can Be Secured – Tech School, College, Apprenticeship Program
  C. Entrance Requirements
  D. Other

V. Working Conditions
  A. Hours
  B. Health and Accident Hazards
  C. Type of Work
  D. Physical or Mental Effort Required
  E. Effect on Life Style of Worker

VI. Qualifications of Worker
  A. Personal
  B. Character
  C. Physical
  D. Mental
  E. Other

VII. Economics of the Job
  A. Growing Occupation
  B. Crowded
  C. Seasonal
  D. Entering Salary
  E. Potential Salary

VIII. Opportunities
  A. For finding this Job
  B. Advancement
  C. What Other Jobs Could I Switch To If The Job Became Obsolete

IX. Knowledge of Self
  A. Is This Job Compatible With My Interests?
  B. Do I Have The Necessary Mental & Physical Abilities For This Occupation?
  C. Have I Spoken To A Person In This Occupation and/or Spent Time Doing This Type Of Work?
  D. Can I Imagine Myself Doing This Work 10 Years From Now?

2. KNOW YOURSELF STUDENT INVENTORY

*(*indicates correct answer)*

Answer True or False to the following questions. Circle the correct answer.

1. More than 75 percent of the people working are content with their occupations.
   a. True
   *b. False
2. Being able to get along with people is an important trait that an individual must have if he hopes to succeed on a job.
   *a. True
   b. False
3. Values are something we think are important.
   *a. True
   b. False
4. Most people's personalities begin forming after the age of twelve.
   a. True
   *b. False
5. After a person's personality has been formed, it is impossible to change it.
   a. True
   *b. False
6. An interest inventory test will give you your I.Q. score.
   a. True
   *b. False
7. An individual who has a high degree of interest in the outdoors might consider a career in forestry or conservation.
   *a. True
   b. False
8. A person who knows and understands his abilities, aptitudes and interests will be better able to make a career choice than a person who does not have this information.
   *a. True
   b. False
9. A high school education is an important asset for obtaining a job in today's labor market.
   *a. True
   b. False
10. Life-time earnings for non-high school graduates are about equal to that of high school graduates.
    a. True
    *b. False
11. The personal appearance of a job applicant is not important to the person conducting the interview.
    a. True
    *b. False
12. Many young people are fearful of going for a job interview.
    *a. True
    b. False

Answer the following questions by circling one or more of the letters on the left.

13. Understanding yourself is important because:
    - a. it will help me to understand myself better
    - b. it will assist me in choosing my friends
    - c. it will help me plan my life more realistically
    - *d. all of the above

14. The different cycles in this course will:
    - a. help me to learn about different types of occupations
    - b. teach me how to do better on tests
    - c. help me to get a part-time job
    - *d. all of the above

15. Learning about my interests and aptitudes will:
    - a. help make me a better person
    - b. determine whether or not I should quit school
    - c. help me to evaluate myself and my plans for the future
    - *d. all of the above

16. A personality trait that will help you succeed in a job is:
    - a. tardiness
    - b. immaturity
    - c. laziness
    - *d. honesty

17. The purpose of an interest inventory test is:
    - a. to learn how smart you are
    - b. determine whether you are capable of going to college
    - c. to find a specific job for each student
    - *d. determine the types of interests that each individual has, and to relate broad occupational categories to these interests

18. The first thing that a person does when applying for a job with a company is to:
    - a. take a physical examination
    - *b. fill out a job application form
    - *c. speak to the personnel manager
    - d. demand an interview with the company president

19. Job application forms do not ask questions about:
    - a. your hobbies and interests
    - b. your future career goals
    - *c. your religion and ethnic background
    - d. your school record and work experiences

20. It is important to show up for a job interview, looking:
    - *a. neatly dressed and well-groomed
    - *b. ready for work
    - c. very flashy and overly dressed
    - d. sleepy-eyed and casually dressed

21. Define the following terms: (These definition answers will vary.)
    - a. aptitude:
    - b. interest:
    - c. values:
    - d. vocations:

22. List four personality traits that you have. (Correct answers are numerous and it will be up to the teacher's discretion as to what is correct).
    a.
    b.
    c.
    d.

23. List four personality traits that you admire. Explain why. Have the student use separate sheet for the answer. (Correct answers are numerous. It will be up to the teacher's discretion as to what is correct).
    a.
    b.
    c.
    d.

24. Name at least four things that you should ask someone about an occupation in which you are interested. (Have the student use a separate sheet for the answer).
    a. What are the education requirements?
    b. What is the salary range?
    c. Are there any fringe benefits?
    d. What are working conditions like?
    e. Is this a job with a future, etc.?

25. List four things that you hope to learn from this. (Have student use separate sheet for answer). Correct answers will be numerous. It will be up to the teacher's discretion as to what is correct.

*Introduction to Vocations Manual, pg. 34, New Jersey State Department of Education.

3. PERSONALITY TRAIT CHECKLIST

Read through the list of personality characteristics. Check off and rate those traits that presently apply to you. Study your answers. What do they tell you about yourself? Reread the list a second time and underline those personality characteristics that you would like to improve upon or have. Write a short composition about the type of person you would like to become.

I Am The Type of Person Who Is:

____ aggressive
____ alert
____ ambitious
____ angered easily
____ conscientious
____ neat
____ courteous
____ prompt
____ dependable
____ friendly
____ honest
____ industrious
____ compassionate
____ mature
____ cooperative
____ poised
____ curious
____ sympathetic
____ tactful
____ trustworthy
____ well-groomed
____ loyal
____ considerate
____ patient
____ creative
____ sociable
____ respectful of property

I would like to become the person who is ______________________________

____

____

____

____

____

____

____

____

____

____

____

____

____

____

Martin Kornfeld, Herbert Hoover Junior High School, Edison, New Jersey

4. CAREER EDUCATION SURVEY

*(*indicates correct answer)*

1. Many jobs are unimportant.	T	F*
2. Most of us could be successful in a number of different occupations.	T*	F
3. Being a girl does not influence occupational choice.	T	F*
4. Experiences we have in childhood affect our career choices.	T*	F
5. How we feel about ourselves affects our job choices.	T*	F
6. Most people could be successful in different occupations.	T*	F
7. A black has an equal chance for employment.	T	F*
8. New occupations are always coming into existence.	T*	F
9. Personal characteristics are very important for job success.	T*	F
10. Most people are satisfied with one occupational choice.	T	F*
11. For some occupations, it is necessary to live somewhere else to get a promotion.	T*	F
12. Our personal characteristics change throughout our lives.	T*	F
13. Most adults can be retrained for a different occupation.	T*	F
14. Most of us will stay at one occupation throughout our lives.	T	F*
15. Staying in your community affects the number of occupations available to you.	T*	F
16. Our success and failures do not contribute to career decision-making.	T	F*
17. It is important to understand ourselves to make good occupational choices.	T*	F
18. The occupational market is always in a state of change.	T*	F
19. A person's size does not affect his occupational choice.	T	F*
20. It is a person's responsibility to gather information about the world of work and occupations he is interested in.	T*	F
21. A recession affects some occupations more than others.	T*	F
22. How well you do in school does not affect occupational choice.	T	F*
23. The Hippie Movement has affected the retail business.	T*	F
24. A person should be allowed to make his own occupational choice.	T*	F
25. Your health condition will affect the number of jobs open to you.	T*	F
26. Changes in the world situation do not affect job opportunities.	T	F*
27. Each of us are responsible for our occupational choices.	T*	F
28. If you are a doctor and do not like your work, you cannot change to a different job.	T	F*
29. Political decisions do not affect the occupational market.	T	F*
30. Occupations can be classified into a group due to their similarities.	T*	F
31. The introduction of machines to save labor affects many occupations.	T*	F
32. Your hobbies could have an effect on your occupational choice.	T*	F
33. School courses can be important for later occupational choice.	T*	F
34. All occupations contribute to our society's way of living.	T*	F
35. You will probably have more leisure time than your father.	T*	F
36. The amount of time you have for leisure is not affected by your occupation.	T	F*
37. Knowing how different occupations are interrelated gives you a wider range of occupational choice.	T*	F
38. Most occupations have no disadvantages.	T	F*
39. After high school, it is necessary to go to college for further training.	T	F*
40. There are several ways to get training to become an airline pilot.	T*	F
41. All jobs give people personal satisfaction.	T	F*
42. There are things you can do to make an occupation more satisfactory.	T*	F
43. There are usually several ways to get training for a specific occupation.	T*	F
44. Every occupation has its disadvantages.	T*	F
45. A person who is dissatisfied with one company can be satisfied with another company doing the same kind of work.	T*	F

Complete the following items:

List three things you are interested in.

List three occupations in line with your interests.

List three things you can do well.

List three reasons why people work.

What causes occupations to be added and/or eliminated?

Where could you get information about occupations (name as many as possible)?

Reprinted from A Career Education *Work-Study Program,* San Bernardino Schools, California, 1972, pp. 25-28.

CARPENTRY

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Carpentry

by John DeHaan

A. INTRODUCTION

Carpentry today is a fast growing occupation. Our nation is constantly expanding its industries and its homes.

To keep up with population growth, qualified carpenters are essential. This course of study exposes the student to carpentry as a vocation and an avocation. He gains contact with a broad range of professionals, from a local builder to a large contracting firm.

Through these two perspectives the student becomes acquainted with all aspects of the career of carpentry. The course of study also acquaints the student with carpentry-related careers.

With the information he acquires during the carpentry cycle, the student should develop an awareness of many careers in carpentry as well as the relationship of the carpenter to other professionals in the building trades.

This course is set up by objectives and related activities. The instructor should vary the activities relating to objective 4, the hands on part of the course, with activities relating to objectives 1 and 2.

B. OBJECTIVES

1. The student will be able to list at least 5 careers in carpentry related fields and be knowledgeable of the training and education necessary to enter and progress in these careers.
2. The student will be aware of the availability of carpentry-related jobs in his area and in other states.
3. The student will be able to recognize and identify the safe use of hand tools and machines related to the carpentry trade and be able to define at least 10 terms used in carpentry.
4. The student will be able to trace the steps involved in carpentry, from drawing board to finished product.
5. After exposure to the field of carpentry, the student will be able to evaluate his own potential in this field.

C. ACTIVITIES RELATING TO OBJECTIVES

UNIT 1: OVERVIEW

Objectives 1-5: (see above)

Time line: *4 days.*

Activity 1: Introduction to the carpentry trade. Discussion of job opportunities, qualifications, salaries, advantages, disadvantages.

Activity 2: Pre-test (see section H).

Activity 3: Discussion of answers to pre-test.

Activity 4: Post-test (at end of the cycle)

UNIT 2: IDENTIFICATION OF TOOLS AND TERMS

Objective 3: The student will be able to recognize and identify the safe use of hand tools and machines related to the carpentry trade and be able to define at least 10 terms used in carpentry.

Time line: *3 days.*

Activity 1: Stanley tool and safety charts are referred to, with a particular emphasis on the safety aspects.

Activity 2: All hand tools are handled by the students as the teacher illustrates their particular uses.

Activity 3: The uses of machine tools are illustrated by the teacher.

Activity 4: The students are shown machine guards, magnetic switches, panic buttons, fire extinguishers, safety clothing, safety glasses, safety posters, exits, fans, and dust collectors.

Activity 5: Students take a field trip to a building site where the teacher illustrates the meaning of the structural terms used in carpentry. (See section E.)

If this field trip is not possible because of weather or lack of access to building site, the school plant itself can be used.

UNIT 3: FROM DRAWING BOARD TO COMPLETED PRODUCT

Objective 4: The student will be able to trace the steps involved in carpentry, from drawing board to finished product.

Time line: *8 days.*

Activity 1: Blue prints for a house are laid out for the students to view.

Activity 2: The teacher shows the techniques used for reading blueprints, various symbols used for representation within buildings, and the necessity for precision in scale measurements.

Activity 3: Using a scale and tape measure the students lay out one room with closets from the blueprint.

Activity 4: Students are shown completed projects and related plans for 1) A frame house, 2) a small cutting board, 3) a napkin holder and 4) decoupage. (The A frame house will take additional time outside of class to complete).

Activity 5: Students choose one project to complete for the cycle.

Activity 6: Students, using a ruler and pencil, draw a basic blueprint for their project.

Activity 7: Teacher checks students' drawings for accuracy and distributes needed materials. (With the exception of d., all prints are included in H.)

a. Napkin holder – 1" white pine and dowel rods.
b. Cutting board – 1" red oak and dowel rods.
c. Decoupage – soft wood – Pine.
d. A frame house – 2" x 6", 2" x 8", 4" x 8", balsa wood, tongue depressors for shingles.

Activity 8: Additional required tools are demonstrated: files, drill press, hand drill, portable electric drill, drill bits, sandpaper and glue.

Activity 9: Teacher illustrates gluing techniques utilizing parallel and bar clamps.

Activity 10: Students work on their projects for at least 5 or 6 days. This activity is interspersed with activities from objectives 1 and 2. The teacher assists students.

Activity 11: When student projects are nearing completion the teacher demonstrates various finishing techniques: stains, varnishes, lacquer, shellac and paints that the student will need in his project.

UNIT 4: CARPENTRY CAREER EXPLORATION

Objectives 1 & 2:
1. The student will be able to list at least 5 careers in carpentry related fields and be knowledgeable of the training and education necessary to enter and progress in these careers.
2. The student will be aware of the availability of carpentry-related jobs in their area and in other states.

Time line: *6 days.*

Activity 1: Film "To Touch the Sky" – 28 minutes
Discussion of careers viewed in film.

Activity 2: Field trip to a local lumber yard.

Activity 3: Follow up discussion of home construction materials, jobs available and management of the lumber yard.

Activity 4: Guest speaker – An experienced builder who can discuss unions, training, salary, benefits, seniority, availability of jobs in the area, and in other states. This is followed by a question and answer period.

Activity 5: Students bring to class want ads pertaining to carpentry careers. Each job is identified by the student and includes qualifications, salary, advantages and disadvantages, and life style. The teacher adds to the student's information.

Activity 6: Film "Tamap Roof Sheathing Study"
Follow up discussion of the film: the relationship of the economy to the building trades, the need for many careers in the building trade, union and non-union advantages and disadvantages.

UNIT 5: SELF-EVALUATION

Objective 5: After exposure to the field of carpentry, the student is able to evaluate his own potential in this field.

Time line: *1 day.*

Activity 1: The student evaluates and grades his own project. The class votes on whether they agree or disagree with his evaluation. The teacher grades the finished project and indicates the basis for his grading; completion, construction, finish, etc.

Activity 2: At the end of the cycle the student hands in a written assignment on the positive and negative aspects of carpentry careers and indicates whether he chooses to pursue training in this field for a vocation, an avocation, or not at all.

D. LIST OF CAREERS IN CLUSTER

- Framer
- Roofer
- Cabinet Maker
- Floor Layer
- Tile Man
- Sheet Rock Installer
- Siding Installer
- Mill Worker
- Building Supply Delivery Man
- Salesman
- Building Supply Clerk
- Secretary
- Accountant-Bookkeeper
- Lumber Yard Hand

E. GLOSSARY OF STRUCTURAL TERMS

Anchor bolt — the bolt which anchors the sill to the foundation.
Apron — the inside trim below a window sill.
Baseboard or skirting — a finish trim at the base of a wall.
Beam — horizontal timber supporting load.
Bearing walls — those walls which serve as partitions and support the roof and upper stories.
Bracing — the ties and rods used for strengthening and reinforcing framework of the building.
Casement — a type of hinged or pivoted window which swings open along its entire length.
Clapboard — a standard siding, shingle-shaped in cross-section.
Door frame — the finished frame which forms a door opening.
Dormer — a projection upwards and outwards on a section of a roof to provide light, ventilation, style, and interior head room.
Flashing — sheet metal used around openings and valleys in a roof and wall construction to prevent seepage of moisture.
Footing — an enlarged course of either concrete or stone placed under foundations or columns to provide a large weight-bearing surface.
Framing — the skeleton framework of a building including walls, floor, and roof.
Gambrel roof — a symmetrical roof with two different pitches on each side. The lower of which is often 60° and the upper 30°.
Girder — the main carrying timber used to support the interior ends of the floor joists.
Header — that member used in framing an opening which is fastened at right angles to full-length studs or joists and also supports cut-off members.
Joist — one of a series of parallel, horizontal structural pieces laid on edge and used to support the floor or ceiling.
Pitch — angle or degree of the slope of a roof, usually expressed as a ratio between the rise and the run.
Plate — uppermost horizontal member of a framed wall.
Rafters — the members which form the skeletal rib-like framework of a roof.

Rise – the vertical distance from the top of the plate to the peak of the roof in roof construction, or from one floor to the next in stair construction.

Run – the horizontal distance which the rafters span in roof construction or the horizontal distance which the jacks span in stair construction.

Sheathing – the material used to close in the skeletal framework.

Span – the distance between vertical exterior points of structural supports.

Sup-floor – rough flooring made of boards, matched lumber, or plywood, and laid on joists to serve as a base for the finished floor.

F. RESOURCES

Films

1. Subject: Industrial Arts
   Title: "To Touch the Sky"
   Source: Modern Talking Picture
   Address: 315 Springfield Avenue, Summit, NJ 07901
   Rental: Free: xx Sound, Color
   Length: 28 minutes
2. Subject: Industrial Arts
   Title: "Tamap Roof Sheathing Study"
   Source: Film Department American Plywood Association
   Address: 1119 A Street, Tocoma, Washington 98401
   Rental: Free: 16 mm, Sound, Color
   Length: 26 minutes

Sources for Free Pamphlets and Brochures

American Institute of Timber Construction
333 West Hampden Avenue
Englewood, Colorado 80110

American Plywood Assoc.
666 North Lake Shore Drive
Chicago, IL 60611

California Redwood Assoc.
617 Montgomery Street
San Francisco, CA 94111

Fine Hardwoods Assoc.
666 North Lake Shore Drive
Chicago, IL 60611

Hardwood Plywood Manufacturers Assoc.
PO Box 6246
Arlington, Virginia 22206

National Particleboard Assoc.
2306 Perkins Place
Silver Springs, MD 20910

National Oak Flooring Manufacturers Assoc.
814 Sterick Building
Memphis, Tennessee 38103

Northern Lumber Manufacturers Assoc.
13 South Street
Glens Falls, NY 12801

Red Cedar Shingle & Handsplit Shake
5510 White Building
Seattle, Washington 98101

American Hardboard Assoc.
20 North Wacker Drive
Chicago, IL 60606

National-American Wholesale Lumber Assoc.
180 Madison Ave.
New York, NY 10016

National Lumber & Building Dealers
Suite 302 Ring Building
Washington, DC 20036

National Paint, Varnish & Lacquer
1500 Rhode Island Ave.
Washington, DC 20005

Western Red Cedar Lumber Assoc.
700 Yeon Building
Portland, Oregon 97204

Western Wood Mouling & Millwork
PO Box 25278
Portland, Oregon 97225

G. BIBLIOGRAPHY

Spencer, H. C., *Basic Technical Drawing,* New York: MacMillan Company, 1956.

Hammond, Donnelly, Harrod, Rayner, *Wood-Working Technology,* Bloomington, Ohio: McKnight and McKnight Publishing Company, 1961.

Groneman, Chris, *General Wood Working,* New York: McGraw-Hill Company, Third Edition.

Ross, Stan. *The World of Drafting.* Bloomington, Ohio; McKnight and McKnight Publishing Company, 1971.

Wright, Lawrence, *Drafting, Technical Communication,* Bloomington, Ohio: McKnight and McKnight Publishing Company, 1968.

Groneman, Chris, Feirer, John. *General Shop.* New York: McGraw-Hill Book Company, 1963.

Groneman, Glazener. *Technical Wood Working.* New York: McGraw Book Company, 1966.

Professional Journal for Teachers
Industrial Education
262 Mason Street
Greenwich, Connecticut 06830

H. STUDENT MATERIAL FOR DUPLICATION

CARPENTRY PRE-POST TEST

1. List 5 jobs available in the carpentry trade.
   - a.
   - b.
   - c.
   - d.
   - e.

2. The term "stud" means
   - a. the 2" x 6" nailed to the ridge pole
   - b. the vertical framing member in all walls
   - c. a board used to hold shingles on a roof

3. List 4 safety precautions to follow on a carpentry job.
   - a.
   - b.
   - c.
   - d.

4. Multiple choice:
   - 1. framing square _____
   - 2. claw hammer _____
   - 3. hammer hook _____
   - 4. cross-cut saw _____

   - a. use pull and hammer nails
   - b. used to cut rafters and studs
   - c. used to lay out rafters
   - d. used to hang up your hammer
   - e. carriers strapped on a belt to hold hammer while not in use

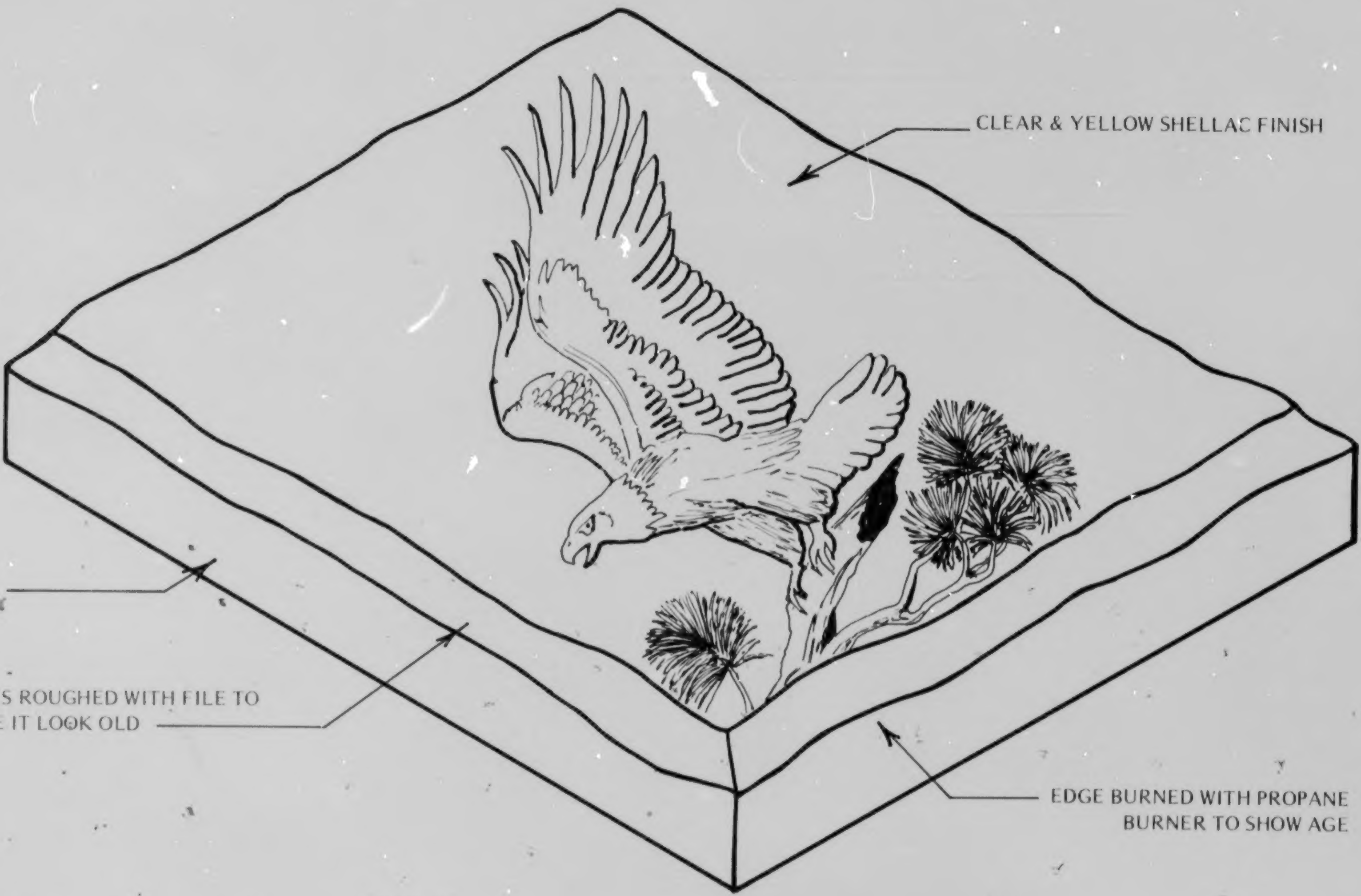
5. Multiple choice:
   - 1. door frame _____
   - 2. girder _____
   - 3. framing _____
   - 4. plate _____
   - 5. pitch _____
   - 6. rafter _____

   - a. main carrying timber used to support the interior ends of the floor joist
   - b. upper most horizontal member of a framed wall
   - c. the member which form the skeleton rib like frame work on a roof
   - d. the finished frame which forms a door opening
   - e. the skeletal framework of a building
   - f. angle or degree of the slope of a roof usually expressed as a ratio between the rise and the run

6. Multiple choice:
   - 1. framer _____
   - 2. roofer _____
   - 3. floor layer _____
   - 4. cabinet maker _____

   - a. workman who checks framing members and concrete work
   - b. workman who puts down final finished floor
   - c. workman who puts up skeletal sections of a house
   - d. workman who lays roof shingles
   - e. workman who puts in sub floor
   - f. workman who constructs shelves and storage areas

DECOUPAGE



CLEAR & YELLOW SHELLAC FINISH

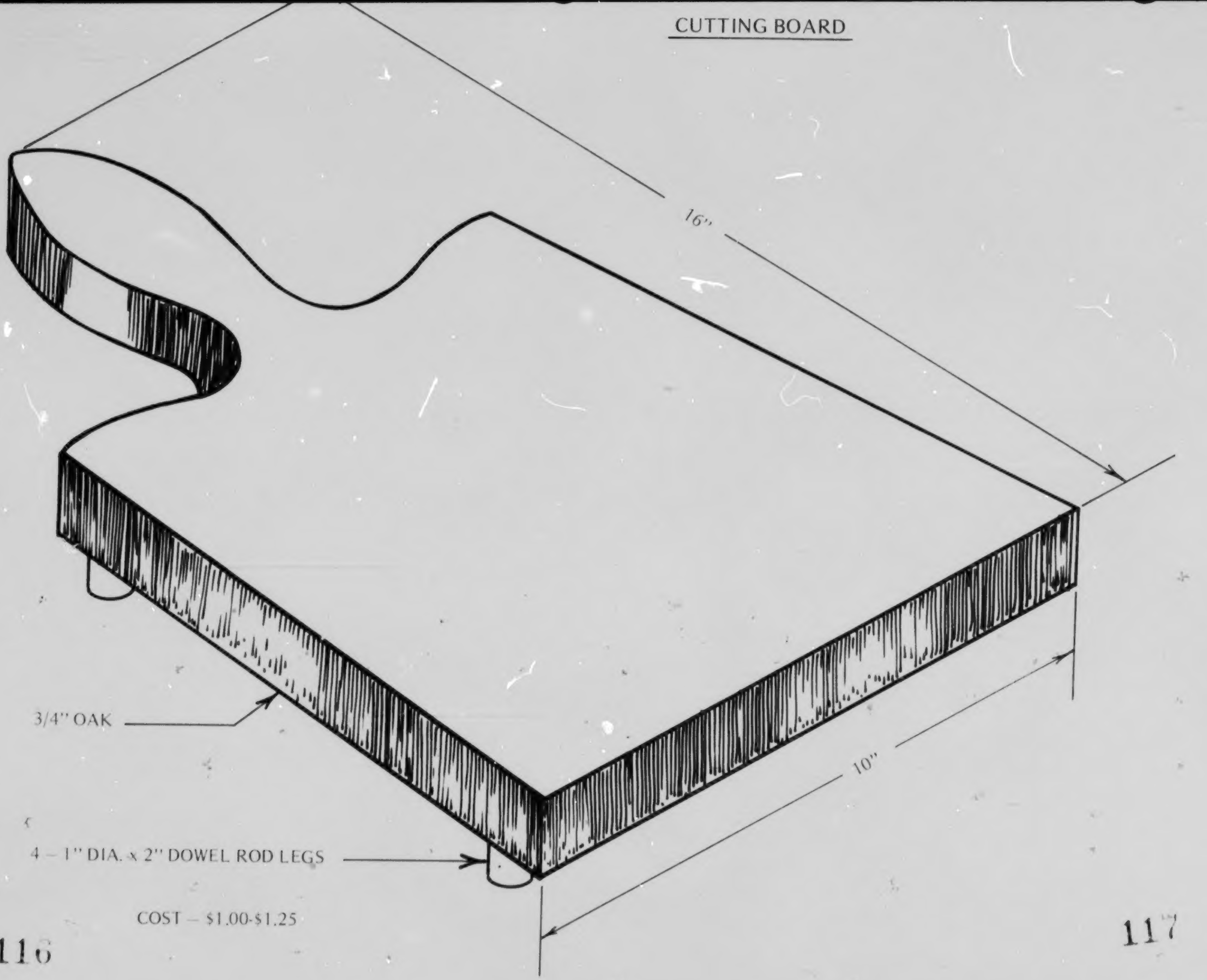
3/4" PINE

EDGES ROUGHED WITH FILE TO
MAKE IT LOOK OLD

EDGE BURNED WITH PROPANE
BURNER TO SHOW AGE

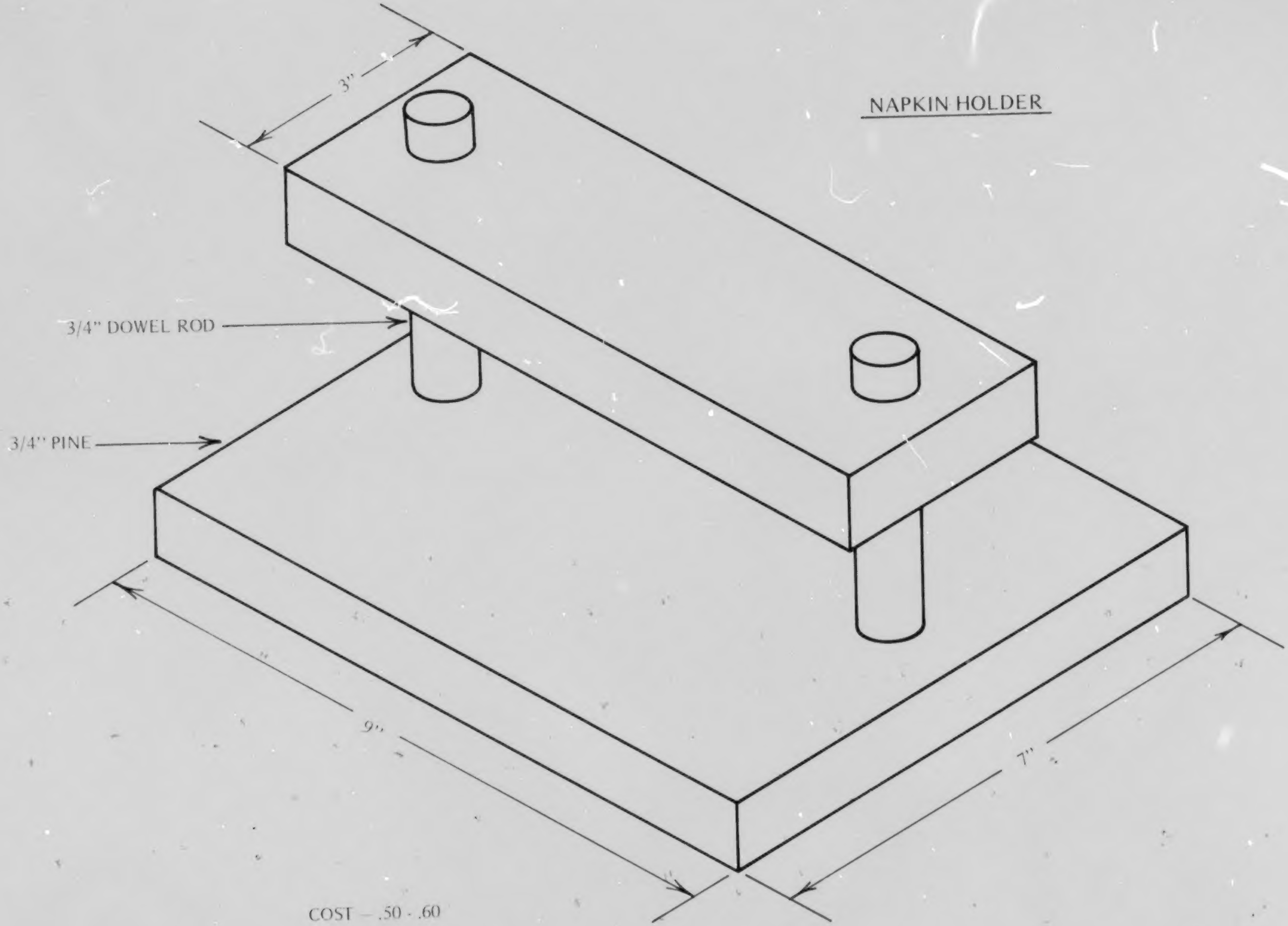
COST .50

CUTTING BOARD


16"
3/4" OAK
10"
4 – 1" DIA. x 2" DOWEL ROD LEGS

COST – $1.00-$1.25

NAPKIN HOLDER


3"
3/4" DOWEL ROD
3/4" PINE
9"
7"

COST — .50 - .60

DRAFTING

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Drafting

by Mary Gail Menzel and Arthur Becker

A. INTRODUCTION

The broad goal of this career cycle is to acquaint the student with the role of the draftsman as a link between the designer and the producer in the industrial chain. All design concepts for both mass-produced and limited-production manufactures are first drawn in detail using standard engineering drawing techniques. Drafting is thus a "universal language" for communicating ideas through a picture form whose symbols have specific meanings.

To develop proficiency in any new "language", the student must learn a basic vocabulary. In drafting, the "vocabulary" is a symbolic system which communicates to the reader the size, shape, type of material and fabrication of an object. If the pictorial representation is clear and readable, the object produced by the craftsman who reads the drawing will match the designer's concept.

Using the student's own life experiences as an introduction to this unit, the student will first develop an awareness of the broad scope of industrial activities which depend upon the draftsman's skill. He will then be introduced to the terminology and materials basic to all drafting subspecialties. Thirdly, the student will develop the skills to produce rudimentary drawings which are "clean", accurate and readable. And finally the student will make a self-assessment of his own potential for training as a draftsman.

Thus the cycle is *not* intended as a basic course in drafting. The thrust of the presentation is an exploration of the vocation of drafting in its many forms. The "hands-on" activities, which consume about one-half of the course time, are intended as a *simulation experience* for the student; that is, the student actually uses drafting tools and produces drawings, however simple. It is important for students to learn that the vocation requires certain qualities of temperament, patience, precision and a meticulous approach to a task. Therefore some of the demands which are made upon draftsmen are simulated for students in these activities.

B. OBJECTIVES

1. The student will be able to define the term "drafting."
2. The student will be able to list and describe the educational prerequisites and job responsibilities for professional draftsmen within each of the following subspecialties:
    a. architectual
    b. aeronautical
    c. mechanical
    d. civil
    e. patent
    f. topographical
    g. technical (illustration)
3. The student will be able to identify and use the following basic drawing equipment:
    a. drawing pencils
    b. sander
    c. T-square
    d. Triangles
    e. Scale
    f. erasers and eraser shield
    g. dust brush
    h. drawing board
    i. masking tape
    j. compasses
    k. dividers
4. The student will be able to perform the following drafting exercises to simulate the "on the job" functions of a draftsman:
    a. read and take measurements from a triangular scale to one-sixteenth of an inch.
    b. translate scale measurements to fractions of actual size (i.e., develop the concept of "drawing to scale").

c. sharpen and sand drawing pencils for drafting.
d. attach paper to drawing board using masking tape and aligning with T-square.
e. produce horizontal lines using the T-square.
f. produce vertical lines using triangles and the T-square.
g. produce inclined lines using triangles and the T-square.
h. produce parallel and perpendicular lines, horizontally, vertically and inclined at 30°, 45°, and 60°.
i. erase, using draftsman's erasers, eraser shield and dust brush.
j. produce circles with compasses and leads.
k. transfer line measurements from triangular scale to drawing using dividers.
l. produce standard format for layout (border, title block and assembly notes).
m. produce guide lines and lettering, in both single gothic and italic form.

5. The student will use the rudimentary drafting and sketching techniques developed in the cycle in hobby and leisure time activities of his own choosing.
6. The student will be able to evaluate his own aptitudes, potential for success and interest level in a drafting career through his experience with "hands-on" activities, skills encountered in the cycle and other career exploratory activities.

C. ACTIVITIES AND RESOURCES

UNIT 1. INTRODUCTION TO DRAFTING

Objectives 1 & 2: (see page 114).

Time line: *5 – 6 days.*

Activities:

1. Pretest (see section F).

2. Teacher introduces topic, "What is drafting?" Elicits reponses from students, through discussion, their perception of the profession. Uses objects in the room to guide their understanding of drafting as a tool of production. Have students list 10 objects in the room which had to be drawn to specification before production. Introduce motion of machine tools which had to be designed, drawn and built in order to produce each object.
3. Shop teacher in school visits class. Dialogue between shop teacher and drafting teacher to develop idea of designer to draftsman to craftsman. Shop teacher draws sketches on chalkboard to illustrate.

   Students are requested to produce a sketch of anything they have ever designed and constructed. A model of a plane, an object constructed in an industrial arts class, a home project of painting or item of clothing that was constructed from a pattern for sewing.
4. Supervisor of Buildings and Grounds visits classroom with plans and blueprints for the School building. Places of common knowledge within the building are pointed out to students. Uses of architectural drawings in construction and maintenance of building are indicated to students. Electrical, plumbing and heating systems are described and identified on the blueprints. Accuracy of measurements and specifications of materials are stressed as essential elements of construction.
5. Scavenger hunt. Using building plans introduced yesterday, each student is assigned a building element shown on the plan to find by locating it physically. Each student then returns to the classroom and, referring to the blueprint, describes in writing the location of the site he was assigned to look for in the "scavenger hunt." Example: "I left my seat and walked to the door, 10.5 feet parallel to the rear wall of the classroom. I turned left and walked 37 feet where I made a perpendicular turn to the right, etc."
6. Using the verbal description produced yesterday in the "scavenger hunt" each student, without referring to the blueprints, will produce a sketch of his "trip" in the building showing the locus of his path.
7. As a summary of the week's introductory activities to drafting as a career, a film is shown:
   Occupations and Opportunities in Drafting (Bailey-Film Associates) 1968; 13 minutes; sound; color. For further information see *Lens and Speaker*, V.9.N.1.
8. A follow up discussion of education and responsibilities for draftsmen is held at this time.

UNIT 2: TWO WEEK JOB SIMULATION UNIT

Objectives 3 & 4: (see page 114).

Activities:

1. Teacher displays and describes the function of each of the following items basic to drafting:
   a. drawing pencils
   b. sander
   c. T-square
   d. triangles (30°, 60°, 90° and 45°)
   f. erasers and eraser shield
   g. dust brush
   h. drawing board
   i. masking tape
   j. compasses
   k. dividers

   A demonstration is given by the teacher of the process involved in setting up preparatory to drawing. Equipment is issued to students, follow-up textbook reading is assigned.
2. Students duplicate demonstration lesson of yesterday, setting up paper and instruments and sharpening pencils of varying hardness. With the instructor's guidance, students take scale measurements as directed using dividers and produce horizontal lines of a specified length. Class works in unison for this activity with continued supervision of teacher.
3. Teacher demonstrates use of triangles and T-square to produce vertical and inclined lines. Students are directed to produce similar lines as teacher circulates to correct individual techniques as required. Students then work independently to produce line segments of directed lengths and angles as indicated in individual "work" assignments issued to each draftsman.

4. As students complete "work assignments" at different rates, the instructor offers guidance in technique and use of equipment. Samples of work assignment sheets follow.

WORK ASSIGNMENT

Sheet #1

Draftsman: John Doe Date:
Problem: Measuring Practice
Equipment: T-Square, Dividers, Scale
Directions: Layout standard drawing sheet with ¼" borders, title box. Starting at top, ¾" from left border, ½" from top border, horizontal lines (½" apart) of the following dimensions:

1. 1-1/2"
2. 2-1/8"
3. 2-5/8"
4. 3-1/16"
5. 3-5/16"
6. 3-9/16"
7. 4-3/16"
8. 5-7/16"
9. 6-1/4"
10. 7-3/8"
11. 7-11/16"
12. 6-7/8"
13. 7-15/16"

WORK ASSIGNMENT

Sheet #2

Draftsman: John Doe Date:
Problem: Instrument Practice
Equipment: T-Square, Dividers, Scale, 30°-60°-90° triangle 45°-45°-90° triangle.
Directions: Set up separate sheets with standard layout for each of the following:

1. Border-to-border horizontal lines, 3/8" apart.
2. Border-to-border vertical lines 1/2" apart.
3. Corner-to-corner parallel lines at 45° to right horizontal, 1/2" apart.
4. Corner-to-corner parallel lines at 45° to left horizontal, 1/2" apart.
5. Same as #3, at 60° to right horizontal.
6. Same as #4, at 60° to left horizontal.

   Same as #3, at 30° to right horizontal.
8. Same as #4, at 30° to left horizontal.

WORK ASSIGNMENT

Sheet #3

Draftsman: John Doe Date
Problem: Compass Practice
Equipment: T-Square, Dividers, Scale, Large and Small Compasses.
Directions: Set up drawing sheet with standard layout. Bisect sheet with horizontal and vertical guide lines to determine center of sheet. Develop concentric circles, working from innermost to outermost circles, of the following diameters:

1. 1-5/16"
2. 2-1/4"
3. 2-5/8"
4. 3-1/2"
5. 4"
6. 4-3/16"
7. 5-1/4"
8. 5-3/4"
9. 6-1/2"
10. 7-3/8"
11. 7-15/16"
12. 8-1/2"
13. 9-5/8"

WORK ASSIGNMENT

Sheet #4

Draftsman: John Doe Date:
Problem: Lettering Practice
Equipment: T-Square, 4-H and 6-H pencils
Directions: Set up drawing sheet with standard layout. Develop lettering guidelines for 1/8", 3/16" and 1/4" letter heights. Using textbook samples, produce examples of gothic and italic lettering.

UNIT 3: ONE-WEEK DRAFTING CAREER SUMMARY UNIT

Objectives 5 & 6: (see page 115).

For the final week, a number of career exploratory activities are suggested which, in combination with the job simulation experience, will give the student sufficient data to assess his own aptitude and interest in drafting as a vocation. The final activity is thus a "values clarification" exercise during which students develop a list of character, personality, temperament and other individual traits which would predict success and satisfaction as a draftsman. Using this list, students then evaluate their own and their classmates' potential for further training.

Activities:

1. Speaker. An architect is invited to discuss a local building project with the class. Plans for the project are shown with attention to local building codes, materials and specifications, costs, emphasis on how plans were drawn by architectural draftsmen and how they will be employed in construction. The architect is also asked to discuss the educational background and licensing required in his profession.
2. A construction site discussed in Activity #1 is visited by the students. As much as possible, workmen in a variety of building trades are interviewed by students with particular emphasis on their use of architectural drawings in construction.
3. A field trip to a drafting pool is arranged. Students are given the opportunity to observe draftsmen who do simple tracing work or who draw plans from written concepts. Civil drafting, such as cross sections of road beds, showing elevation changes in the road where excavation or fill is necessary can be observed, as well as drawings of bridges, dams, etc. The services of a drafting pool would be described, such as in completing work overflow for a State Highway Department.

   Draftsmen working for a job pool may be very specialized and work through the pool so that they continually have work in their area. Some draftsmen specialize in machine and tool design. A highly specialized area would be the design and layout of conveyor belt systems which move material and packages through a plant or move appliances from one work station to another during assembly. Still others will specialize in wiring diagrams for industrial plants or public buildings, such as the high school. Some do electrical circuit work, where the students would observe a printed circuit being drawn, photographed, and reduced in size, so it may fit in a TV set or calculator.

   Depending on the area, one could expect almost any kind of work to be done by a drafting pool, but most importantly they would see work from many different types of industry.
4. Exploration of Aptitudes, Interests and Personality Factors of Draftsmen. The topic is introduced by the teacher in a summarization of the activities of the four-week cycle. Students identify the traits they feel could be important in an individual considering drafting as a career. With teacher guidance, responses are elicited from students describing a profile of the "ideal" candidate for training as a draftsman: such responses as patience, attention to detail, ability to persevere at a tedious task, etc. might be mentioned. As many terms or statements as possible should be generated. Students then discuss each statement with reference to themselves. Each student is asked to rate himself on a scale of 1-5 in terms of each statement.
5. Post test.

D. RESOURCES

Films

McGraw-Hill: Shop Procedures (17 minutes); The Language of Drawing (10 minutes).

Film Strips

McGraw-Hill: Freehand Lettering; Scales.
Bailey Film Associates: Occupations and Opportunities in Drafting (13 minutes).

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Helper, D. E. and Wallach, P. I., *Architecture Drafting and Design* New York: McGraw-Hill, 1971.
Walker, John R., *Exploring Drafting.* South Holland, Illinois: Goodheart-Willcox Co., 1972.
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Yankee, Herbert W., *Machine Drafting and Related Technology.* New York: McGraw-Hill, 1966.

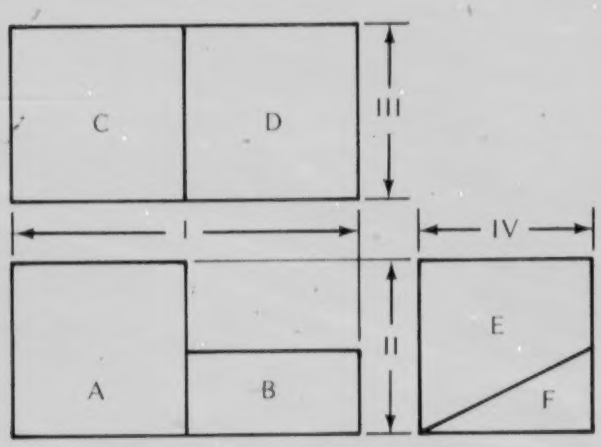
F. MATERIALS FOR STUDENT DUPLICATION

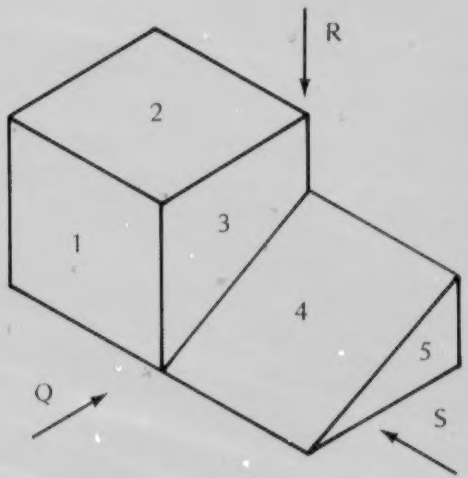
PRE AND POST TEST

1. MATCHING

______ Architectural Draftsman
______ Aeronautical Draftsman
______ Mechanical Draftsman
______ Civil Draftsman
______ Patent Draftsman
______ Topographical Draftsman
______ Technical Draftsman or Illustrator

a. Draws pictures of articles for instruction manuals or advertising materials.
b. Using symbols he draws pictures of mountains, rivers, and depressions being mapped.
c. Draws plans for special machinery and machine tools.
d. Draws buildings.
e. Specializes in drawing detailed plans of new inventions so others can't steal his inventions.
f. Draws parts for commercial planes.
g. Draws roads, bridges, canals, dams, etc.





2. Match the planes A thru F of the multiview drawing with the planes 1 thru 5 of the pictorial.

A ______ D ______
B ______ E ______
C ______ F ______

3. In Orthographic Projection what three views indicated by the arrows on the pictorial are commonly drawn?

Q ______
R ______
S ______

4. T or F. We see the true size of plane 4 in the top view. ________

5. Show whether dimensions I thru IV indicate height, width, or depth.

I ______________________________

II ______________________________

III ______________________________

IV ______________________________

6. Measure to the nearest quarter inch ______________

Measure to the nearest eighth inch ______________

Measure to the nearest half inch ______________

Measure to the nearest sixteenth inch ______________

7. Identify objects as they are held up.

1. sander
2. T-square
3. Triangles (30°-60°-90°, 45°-45°-90°)
4. Scale
5. Eraser shield
6. Dust brush
7. Compasses
8. Dividers
9. Drawing board

ENVIRONMENTAL SCIENCES

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Environmental Sciences

by J. Newcomb and S. Lance

A. INTRODUCTION

The agricultural and environmental cluster includes more than thirty specialized occupations found in five general areas. These areas are pollution and its control, agriculture, horticulture, forestry, and energy. Numerous other areas, and therefore jobs, could be included in this cluster, but time limits their coverage.

This is a twenty-two day cycle designed to help the instructor introduce environmental careers. It is flexible and should be treated as such. All field trips, speakers and labs can, and should, be modified to the teacher, school and community.

B. OBJECTIVES

1. The student will be able to define the following terms: environment, ecology, pollution, ecosystem.
2. The student will be able to list four causes of pollution and a possible solution for each. The student will be able to identify four job areas where the solutions are under exploration.
3. The students will be able to use the microscope correctly, identifying two out of seven micro-organisms found commonly in water. The student will also be able to identify those jobs in their career list which utilize a microscope.
4. The students will be able to identify correctly six agricultural occupations, their duties, and background needed to perform them.
5. The students will be able to identify correctly three horticultural occupations, their backgrounds or skills needed to perform them.
6. The students will be able to identify correctly occupations related to energy production and conservation.

C. ACTIVITIES

UNIT 1. DEFINITION AND UTILIZATION OF TERMINOLOGY IN ECOLOGY

Objective 1: The student will be able to define the following terms: environment, ecology, pollution, ecosystem.

Time line: *3 days.*

Activity 1: Pass out the following materials: student folder, occupation list, vocabulary list.

Activity 2: Explain objectives of course: observe, absorb, and enjoy.

Activity 3: Administer pre-test (see section G).

Activity 4: Correct pre-test.

Activity 5: Have students fill in occupation list from corrected pre-test.

Activity 6: Earth Worm lab – *Modern Living Science*, pp. 16-18; or any similar lab which exemplifies the inter-dependency of the biotic and physical environments.

UNIT 2: CAREERS RELATED TO POLLUTION CONTROL

Objective 2: The student will be able to list four causes of pollution and a possible solution for each. The student will be able to identify four job areas where the solutions are effected.

Time line: *2 days.*

Activity 1: Filmstrip: “Man's Natural Environment: Crisis through Abuse” Part I.

Activity 2: Have students fill in film strip ditto.

Activity 3: Class discussion on notes.

Activity 4: Filmstrip: “Man's Natural Environment: Crisis Through Abuse” Part II.

Activity 5: Have students fill in film strip ditto.

Activity 6: Class discussion on notes.

Activity 7: Filmstrip “The Environment: Where Its at in New Jersey”.

UNIT 3: LAB JOBS AND IDENTIFICATION OF MICRO-ORGANISMS

Objective 3: The students will show an ability to use the microscope by correctly identifying two micro-organisms commonly found in pond water. The students will also be able to identify those occupations that involve lab skills.

Time line: *4 days.*

Activity 1: Notes on water pollution (see section G).

Activity 2: Lab – Oil and Water.

Activity 3: *Focus*, p. 106-7. Or any appropriate lab which exemplifies the effects of water pollution on the environment.

Activity 4: Write to the International Oceanographic Foundation for career information.

Activity 5: Movie “The Microscope”.

Activity 6: Discuss ditto on microscope with teacher demonstration.

Activity 7: Pass out micro-organism ditto sheet.

Activity 8: Have students bring in pond water samples.

Activity 9: Microscope lab (see section G).

Activity 10: Discussion of people who use microscope.

Activity 11: Field trip to Municipal Water Treatment Plant or Waste Treatment Plant.

UNIT 4: EDUCATION AND DUTIES OF AGRICULTURE CAREERS

Objective 4: The students will be able to identify correctly six agricultural occupations, their duties and background needed to perform them.

Time line: *7 days.*

Activity 1: Notes on Agribusiness (see section G).

Activity 2: Seed grower lab – *Focus*, pp. 60-62. Or any lab to show the care and attendance to grow plants from seeds and the production of new seeds.

Activity 3: Field trip to fish hatchery or pet shop.

Activity 4: Soil testing lab – Sudbury kit.

Activity 5: Discussion on who tests soils and why.

Activity 6: Guest speakers from Cooperative Extension Agent, Soil Scientist, or Soil Conservationist.

Activity 7: Forestry filmloop “Forestry Aid”.

Activity 8: Walk in the woods discussing tree identification and uses of wood – *Common Forest Trees of New Jersey.*

Activity 9: Speakers – Forester or Forestry aide.

Activity 10: Field trip to Game Farm or Zoo.

UNIT 5: EDUCATION AND DUTIES OF HORTICULTURAL CAREERS

Objective 5: The students will be able to identify correctly three horticulture occupations, their backgrounds and skills needed to perform them.

Time line: *3 days.*

Activity 1: Discuss ditto "Careers in the Floral Industry", Society of American Florists.

Activity 2: Discussion of horticulture occupations (see section G).

Activity 3: Guest speakers – florist or nursery worker.

Activity 4: Field trip to landscape retailer or wholesale greenhouses.

UNIT 6: IDENTIFICATION AND DESCRIPTION OF ENERGY CONSERVATION CAREERS

Objective 6: The students will be able to identify correctly six occupations related to energy production and conservation.

Time line: *2 days.*

Activity 1: Filmstrip "Major Minor".

Activity 2: Fill in occupation list.

Activity 3: Film "Power Reactors"

Activity 4: Field trip to electric company power plant or nuclear powered plant.

Summary Activities

Activity 1: Post-test

Activity 2: Class wrap-up

D. CLUSTER OCCUPATIONS

Agronomist – conduct experiments or investigations in field crop problems; college degree required.

Animal ecologist – study the mutual relationship among organisms and their environment. Ph.D. generally required. Bach degree least required.

Assayer – analyzes an ore to determine the quantity of metal in it; college degree or job training.

Biochemist – study the chemical composition of organisms and the changes caused by genetic and environment. Bachelor's degree at least required.

Biostatistician – population expert; math and science background, college degree.

Boiler operators – operate furnaces in industry, sealed licences of various grades are required.

Botanist – studies the development, physiology, heredity, environment, distribution, and economic value of plants; college degree in botany required.

Chemist – develops chemical substances, works in laboratories; more than ½ of the chemists have Ph.D.

Cytologist – expert in cell development. Master's level degree in biology.

Ecologist – range ecologist, manages, improves, and protects range resources. Bachelor's degree in range management required.

Engineers – all require at least Bachelor of Engineering Degree – watch, check, control, and keep records of the operations of various kinds of equipment.

Entomologist – works in laboratory or in the field studying and classifying insects; college degree minimum required and Ph.D. degree highly recommended.

Fish and game warden – supervises the breeding, hatching, and rearing of game birds; high school education, it is possible to earn Ph.D. in this field.

Floral designer – usually works in florists shops, constructs arrangements of flowers; trade schools, on the-job training, jr. colleges.

Forester – responsible for planning and managing forests; usually works for lumber companies or government agencies; bachelors degree.

Forest recreationist – plans how to use forests and parks, new college courses.

Forestry aide – works for the forester; fights fires, plants trees, etc. High school or college degree.

Geneticist – tries to develop strains, varieties, breeds, and hybrids of plants and animals; trained in college, government agencies, agricultural experiment stations.

Geodesist – studies the size, shape, and gravitational field of the earth and other planets; requires bachelor's degree in geophyte.

Geologist – spends time in the field searching and surveying; Bachelor's degree in geology at least required.

Horticulturist – conducts experiments and investigations on problems of breeding, production of fruits, trees, vegetables; college education required.

Hydrographer – makes surveys of harbors, rivers, and other bodies of water; at least high school required.

Landscape architect – decides which plants and trees will look and grow best in parks, lawns; college degree.

Landscape gardener – plans and develops landscaping operations; high school desirable, post high school education – jr. college or school of horticulture.

Mechanical engineer – design and develop machines, such as jets, rocket, engines, and nuclear reactor; at least a B.S. degree.

Metallurgical engineer – designs processes or plants which extract useful metal from ores; at least a B.S. degree.

Metallurgist – expert in metals, but he must also possess knowledge of ceramics, and plastics; college degree in metallurgy required.

Microbiologist – works in agriculture, drug industry, life sciences, studies bacteria, microorganism; require at least bachelor's degree.

Miner – Mining engineers find, extract, and prepare minerals for manufacturing industry to use; Bachelor's degree at least required.

Nursery worker – takes care of the young plants and trees until they are sold; preferably high school, 2 year college programs.

Oceanographer – biological study, plant and animal life in oceans – how life began; requires at least a bachelor's degree.

Pathologist – specializes in the effects of diseases, parasites, and insects on human cells, tissue, and organs; requires at least bachelor's degree.

Pharmacologist – conducts tests on animals such as rats, guinea pigs, and monkeys to determine the effects of drugs, gases, poisons, dusts, etc. Ph.D. degree generally required for independent research. Bachelor's degree at least required.

Range manager – manages, improves and protects range resources; bachelor's degree in range management required.

Seed grower – produces seeds that farmers plant, high school education, with courses in agriculture, preferrably agricultural college.

Seismologist – studies the earth's interior and earth vibrations caused by earthquakes and man-made explosions; Bachelor's degree in geophysics required.

Soil scientist – helps farmers and other land managers make better use of the soil; at least a bachelor's degree.

Surveyor – measures and charts the land and makes a map for engineer to locate the limit of an oil field, mine, dam, etc.; high school or college education required.

E. GLOSSARY OF TERMS

acidity
alkalinity
annuals
bacteria
biosphere
chain reaction
chlorination
clay
ecology
effluent
environment
filtration
fission
food chain
fusion
germinate
generator
gravel
influent
loam
microoganisms
perennials
ph
pollution
pruning
pulp
purification
reactor
recycle
sand
silt
sod
strip mining
technology
turbine

F. RESOURCES

Texts

Curtis, Mercer, and Winn, *Careers in Focus*, McGraw-Hill Book Company, New York, 1976.
Fitzpatrick, Hole, *Modern Living Science*. Holt, Rinehart, and Winston, Inc., New York, 1970.

Visual Aids

"The Environment: Where It's At In New Jersey". Public Service Electric and Gas Company, 1974. Available through your local electric company.
"Forestry Aid" (filmloop), Job Opportunity Series, Encyclopedia Britanica, Educational Corporation.
"Major: Miner" Texas Gulf Inc., New York, 1974.
"Man's Natural Environment: Crisis through Abuse". Guidance Associates of Pleasantville, New York, 1970.
"Power Reactors". US Atomic Energy Commission, 376 Hudson Street, NY 10014, 1967.

Pamphlets and literature: Free

American Forest Institute
1619 Mass. Ave. N.W.
Washington, DC 20036

Colorado School of Miners
Golden, Colorado 80401
"Student Information Bulletin"

Cooperative Extension Service
Cook College, Rutgers University
New Brunswick, NJ
"Gardening and Home grounds"
"Conservation and Ecology"
"Agriculture and Horticulture"
"Common Trees of NJ"

Iyciak Walton League of America
1326 Waukeegan Rd.
Glenview, IL 60025
"Clean Water"

King Features
235 East 45 St.
New York, NY 10017
"Environmental Careers"
"Agribusiness, Natural Resources"
"Marine Science Careers"

Oceanographic Foundation
1 Rickerbacker Causeway
Virginia Key
Miami, Florida 33149

The Society of American Florists
901 North Washington St.
Alexandria, Virginia 22314
"Careers in Floral Industry"

Society of Mining Engineers
540 Arapeen Drive
Salt Lake City, Utah 84108

Sudsbury Laboratory
Sudsbury, Mass.
"Soil Test Kit"

US Department of Agriculture
US Government Printing Office
Washington, DC 20402
"A Job with the Forest Service" 843
"A Soil Science Career for You" 716

US Department of Interior
Federal Water Quality Administration
A Boy Scout Leaders Guide
"Water Pollution, Its Control"

National Career Information Center
1607 New Hampshire Ave.
Washington, DC 20009

The NJ State Council for Environmental Education
Montclair State College
Upper Montclair, NJ 07043
"A Professional Resource Dictionary"

Wood Industry Careers Program
National Forest Products Assoc.
1619 Mass. Ave.
Washington, DC 20402

G. STUDENT MATERIAL FOR DUPLICATION

TEACHERS: Please read these questions aloud with the students *before* administering the inventory.

PRE AND POST TEST

(**indicates correct answer*)

Have the student circle a letter in the left column for the correct answer.

1. The *aquatic biologist*:
   a. Studies the interaction of plants and animals living in water.
   b. Studies water temperature, oxygen content, light and food availability.
   c. Studies methods of achieving or maintaining the environmental balance.
   *d. All of the above.
   e. None of these.
2. The *biochemist* studies all living organisms and their chemical and biological processes.
   *a. True
   b. False
3. The *biochemist* studies the impact of chemical changes on plants and animals.
   *a. True
   b. False
4. The *biophysicist*:
   a. Is concerned with the physical principles of living organisms and living cells.
   b. Studies the response of organisms to such physical forces as heat, light, radiation, sound and electricity.
   *c. All of these.
   d. None of these.
5. The *biostatistician* is particularly interested in descriptive, measurable data pertaining to animals, plants, and the life processes of humans.
   *a. True
   b. False
6. The *biostatistician* attempts to identify significant relationships among groups of living organisms. These may lead to a better understanding about the causes of illness, the effectiveness of disease prevention techniques, and immunization programs.
   *a. True
   b. False
7. The *cytologist* studies parts of living cells as well as the details of cell division into new cells.
   *a. True
   b. False
8. The *geneticist*:
   a. Studies the characteristics of plants and animals.
   b. He is involved in the physiological improvement of plants and animals.
   c. Studies the genetic processes that determine animal, plant, or human traits and characteristics and the factors that can cause malfunctions or distortions.
   *d. All of these.
   e. None of these.
9. The *microbiologist*:
   a. Studies the growth, structure, and general characteristics of bacteria, viruses, molds, and other organisms of microscopic size.
   b. He conducts experiments by isolating and making cultures of bacteria or other micro-organisms.
   *c. All of these.
   d. None of these.

10. The *pathologist* diagnoses and researches the nature, cause and development of disease.
   *a. True
   b. False

11. The *ecologist* is concerned with the relationship between life and the immediate surroundings.
   *a. True
   b. False

12. The *animal ecologist* studies the life cycles of animals and attempts to determine how environmental factors such as plant growth, moisture, weather and altitude affect the existence of various groups.
   *a. True
   b. False

13. *Animal husbandry* is primarily concerned with the production and care of domesticated animals.
   *a. True
   b. False

14. The *animal husbandryman* conducts research into the breeding, selection, feeding and marketing of livestock and poultry.
   *a. True
   b. False

15. Insects that carry disease or spoil food products are subjects studied by *entomologists.*
   *a. True
   b. False

16. The *entomologist* studies, identifies, and classifies the various types and kinds of insects.
   *a. True
   b. False

17. The *pharmacologist*:
   a. Studies the effect of drugs, gases, poisons, dust, air pollution, and other substances upon the functioning processes of living tissues and organs.
   b. Conducts tests and relates the findings of his research with other medical data and information.
   *c. All of these.
   d. None of these.

18. The *agronomist* strives to maintain or increase crop-yield.
   *a. True
   b. False

19. The *botanist* studies all aspects of plant life.
   *a. True
   b. False

20. The *botanist* is *not concerned* with heredity or the physiology of plants, but is more interested in the economic value of plant life.
   a. True
   *b. False

21. The *forest ecologist*:
   a. Conducts research and studies vegetation, plants, trees, and environmental factors that affect the forest.
   b. Attempts to determine what conditions account for the presence or absence of different varieties of trees.
   c. Studies specific tree classification and plant life history.
   d. Is interested in the light and soil requirements and the resistance to disease and insects of different species of trees.
   *e. All of these.
   d. None of these.

22. The *horticulturist* is interested in the development of new and improved varieties of commercial plants.
   *a. True
   b. False

23. The *assayer* analyzes the results of tests on ores and alloys and determines the values and properties of precious metals.
   *a. True
   b. False

24. The *geodesist* prepares topographical maps and establishes known points of elevation.
   *a. True
   b. False

25. The *hydrographer* performs most of his work outdoors studying water problems.
   *a. True
   b. False

26. The *meteorologist* plays an important role in the analysis of air pollution problems.
   *a. True
   b. False

27. An *oceanographer* spends varying amounts of time at sea studying the ocean, its contents, and its movement.
   *a. True
   b. False

28. The *seismologist* studies the earth's interior and the vibrations of the earth caused by earthquakes, volcanic eruptions and man-made explosions.
   *a. True
   b. False

29. A *soil scientist* often examines and solves problems such as soil drainage and soil usage, and does most of his work outdoors.
   *a. True
   b. False

30. Much of the work of a *hydraulic engineer* is done in an office or a laboratory, but does at times involve fieldwork.
   *a. True
   b. False

31. An *industrial health engineer* works mostly inside reporting on health conditions in a plant or industry.
   *a. True
   b. False

32. A *mechanical engineer* may work in the area of pollution problems.
   *a. True
   b. False

33. A *sanitarian*:
   a. Is concerned with planning for the cleanliness, safety, and enforcement of laws concerning handling, dispensing, and consuming of foods.
   b. Works closely with other health specialists.
   c. May work in sewage disposal plants or land fill areas.
   *d. All of these.
   e. None of these.

34. A *toxicologist* identifies the effects of air and water-borne agents on the health of workers and residents in a particular area.
*a. True
b. False

35. The *landscape architect* plans, designs, and supervises the changing of land areas into useful and attractive sites.
*a. True
b. False

36. The *landscape architect* is involved with the planning of parks, playgrounds, shopping centers, resorts, campgrounds, and homes.
*a. True
b. False

37. List five occupations in environment where one would be working outside in the field. Teachers: The answers to these may be found in the preceding or the following questions.
a.
b.
c.
d.
e.

38. A *fish and game warden* may serve warrants, make arrests, prepare and present evidence for court actions when violations occur.
*a. True
b. False

39. The work of a *forester* is often highly physical and requires constant exposure to all kinds of weather.
*a. True
b. False

40. The *park naturalist* is involved in educational programs dealing with the preservation of the environment.
*a. True
b. False

41. The *range manager* writes reports and provides forms of technical assistance about grazing lands.
*a. True
b. False

42. The *environmental inspector* frequently must act in an advisory capacity to a company that may be on the verge of commiting a violation of the pollution laws.
*a. True
b. False

43. A balanced environment will be possible:
a. When man uses his environment for his benefit.
*b. When it is possible for the environment to keep renewing itself.
c. When man uses all of his natural resources until there are none left.
d. None of the above.

44. An example of a balanced environment is when the sun shines on the trees, causing them to grow, it changes carbon dioxide and water into oxygen and carbohydrates. Animals and people breathe the oxygen and eat the carbohydrates produced. People give off the carbon dioxide the plants need which completes the cycle of a balanced environment.
*a. True
b. False

45. Which of the following cause noise pollution:
    a. Jet planes
    b. Trucks
    c. Construction machinery
    *d. All of the above
46. People take from the environment what they need but they must never take or use all the resources which are available.
    *a. True
    b. False
47. Every living creature exists in relation to other living things.
    *a. True
    b. False
48. Nuclear power plants require huge amounts of water to condense steam back into water.
    *a. True
    b. False

STUDENT HANDOUTS

I. Filmstrip "Man's Natural Environment"
    A. Pollution Sources
        1. City sewage
        2. Industrial wastes
        3. Oil spills
        4. Air pollution from cars, trucks, buses, etc.
        5. Noise — jet plane
        6. Poisons of insecticides
    B. Possible Solutions
        1. Clean Water Act — Government
        2. Air Quality Act
        3. Stronger governmental controls
        4. Science and technology
    C. Pollution Job Related Areas
        1. Research — ecology — industrial
        2. Governmental jobs — city, state, and federal
        3. Sewage Plants
        4. Sanitary landfills
II. Air Pollution
    A. Mixture of many things
        1. Gases
            a. nitrogen
            b. oxygen
            c. carbon dioxide
        2. Also
            a. water vapor
            b. dust
            c. every element and compound that wind or man distributes
    B. Pollution before man
        1. Dust storms
        2. Fires
        3. Volcanoes — 1883 volcanic explosions — several years dust in air
        4. Ocean Storms

- C. Sulfur Dioxide Smog
  - 1. Coal is burned
    - a. sulfur compounds formed – SO_2 – smoke
  - 2. Slow to use because of religion – Lucifer
  - 3. Enlightenment – everyone used it to heat houses – London smog
- D. Effects of Sulfur Dioxide Smog
  - 1. Affects vulnerable parts
    - a. eyes
    - b. nose
    - c. respiratory tract
  - 2. Respiratory damage
    - a. bronchitis
    - b. bronchial asthma
    - c. emphysema
    - d. lung cancer
  - 3. Chronic bronchitis – permanent damage to bronchial tubes
    - a. stops ciliary action – beating action that beats dust out to mouth or throat
    - b. over production of mucus – causes chronic cough, shortness of breath
  - 4. Bronchial asthma – allergic reaction of bronchial membranes to foreign protein or materials
    - a. membranes swell – can't expel air
    - b. wheezing and shortness of breath
  - 5. Emphysema – follows constriction of the finer branches of bronchial tubes
    - a. the bronchiales – smaller parts
    - b. when air expelled – some remains in the tiny air tubes of the lungs called the alveoli.
    - c. when new air is breathed in sacs over expand and balloon larger and larger until they explode.
    - d. causes two adjacent sacs to unite and the process continues
      - 1. reduces number of air sacs
      - 2. destroys capillaries that take oxygen to blood
      - 3. pushes out chest – pigeon chested appearance
      - 4. chronic shortness of breath
      - 5. slow oxygen starvation

- III. Noise: Pollution
  - A. Damage Hearing
    - 1. Insurance claims in US over 1 billion a year
    - 2. Increase tension
    - 3. High blood pressure – heart
  - B. Urban Noise
    - 1. Construction
      - a. cities amplify sounds on buildings
      - b. pile drivers, jackhammers
    - 2. Transportation
      - a. subways – noisiest in world
      - b. others produce better
    - 3. Jet plane
      - a. large urban airports
      - b. landing and take-offs

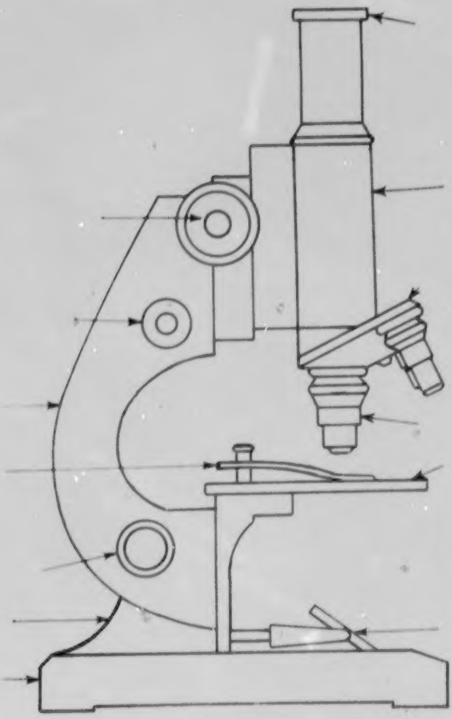
- 4. SST
  - a. faster than sound 650 mph
  - b. 1800 mph
  - c. shock wave sonic boom – thunder clap
  - d. if were a reality 10 shocks a day
    - 1. damage to property $85 million a year
    - 2. national monuments
    - 3. avalanches – landslides

IV. Water Pollution

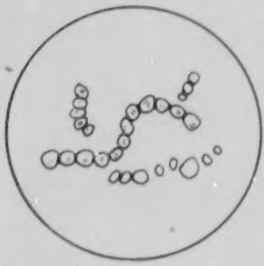
- A. My discussion: hydraulic cycle
  - 1. Solar Energy – Evaporates Water – Vapor in Air
    - a. cool air-condenses-rain
    - b. 90% of rain from evap. of ocean
    - c. transpiration – veg. releases water vapor – all time
  - For class
  - 2. Water Management
    - a. man can control watershed (supply)
    - b. removal of trees that transpire
    - c. grasslands that absorb water & store it
  - 3. Water Demand
    - a. water supply is fixed amount
      - 1. only .007% of ocean is rainfall over land
      - 2. much locked in ice and snow
    - b. 3.59×10^{20} gallons earths yearly supply of fresh water
      - 1. U.S. 4.3×10^{12} gallons rain
      - 2. rivers and lakes 6.5×10^{11} gallons
      - 3. should be ample supply
  - 4. Metabolic Needs
    - a. man needs 2 quarts a day
    - b. gets most in foods
    - c. pint or two for survival
  - 5. Cultural Uses
    - a. Flushing toilet – 3 gallons
    - b. Shower 30 gallons
    - c. Food preparation } 180 gallons/day/house
    - d. Laundering }
  - 6. Public Water Supply
    - a. Planning by communities – float ice bergs
    - b. North American Water and power alliance
      - 1. use water in North America
      - 2. down by canals and reservoirs
- B. Use and Reuse
  - 1. Domestic Recycling
    - a. All water into house – grade A drinking

   b. Priority system
      1. Grade A → Drinking, cooking, washing, and bathing
      2. Grade B → (reproduced from A) – outdoor
         a. car washing, lawn watering, filling pool . . . .
      3. Grade C → flushing toilet
   c. Grade A supplied from well or reservoir
   d. After A uses, waste would be filtered, stored in a basement tank – Grade B & Grade C.
      1. pilot program – filtered laundry and bath stored → used to flush toilets
      2. reduced consumption by 39%
      3. cost for system – $500.00
      4. savings of $20. for water –
2. Industrial Recycling
   a. Steel industry uses 65,000 gallons/ton
      1. Kaiser steel – cut it to 1,400 gallons/ton
      2. tighter government controls and reg. needed
3. Categories of Water Pollution
   a. Toxicity – poisoning by heavy metals in water solution.
      1. lead
      2. mercury
      3. copper
      4. arsenic
      5. chromium
   b. used in plating, galvanizing
   c. metabolic or respiratory block
      1. inhibits or destroy enzymes
   d. bottom mud may hold poisons until disturbed
4. Salinity
   a. salt brines from oilwells or mines released into fresh water
      1. some fish die
      2. fluctuate so much can't adapt
   b. flow of river keeps salt from coming in from sea
      1. Delaware – Phila. supply, 1965
   c. acidity
      1. strip mining leaves, bad coal, iron and sulfur open
      2. lowers pH → more acid
      3. hugh quantities iron and sulfate
      4. reduces oxygen in water
      5. Pennsylvania, Ohio, West Virginia, Ky, Illinois, Missouri, Tenn.
      6. mines are abandoned
      7. industrial wastes adds to acidity
   d. turbidity
      1. China – clay industry – fine particles into water settle on bottom and smother life
      2. naturally fires & clearance of land does same thing
   e. deoxygenation

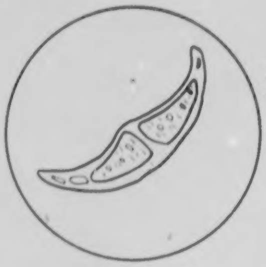
V. Label the Parts of the Microscope



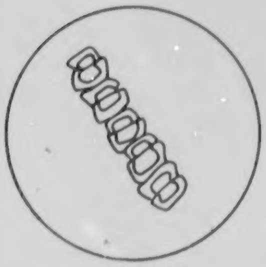
VI. Guide to Microorganisms Found in Water



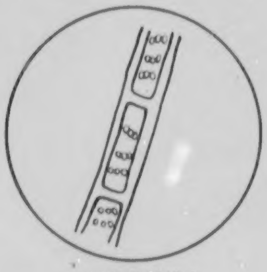
NOSTOC



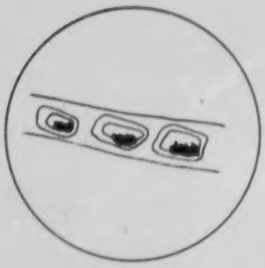
CLOSTERIUM



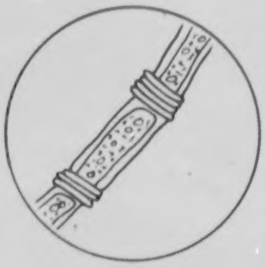
MELOSIRA



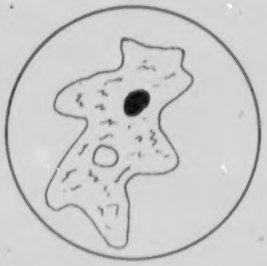
SPIROGYRA



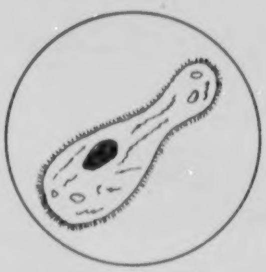
ULOTHRIX



OEDOGONIUM



AMOEBA



PARAMECIUM

VII. Microscope Lab

Purpose: To develop skill and technique in using the compound microscope and in preparation of different materials for identification of microorganisms.

Materials: Microscope; welled-slides; water samples from various locations; eyedropper.

A. Procedure and observations:
1. Prepare microscope for usage
2. With eyedropper place 2 or 3 drops of sample water into welled-slide.
3. Place welled-slide onto microscope stage.
4. Focus microscope so identification of microorganisms can be accomplished.
5. With the help of the given diagrams, locate and draw as many of the following microorganisms:
   a. diatoms
   b. nostoc
   c. spirogyra
   d. ulothrix
   e. oedogonium
   f. amoeba
   g. paramecium

VIII. Water Industry

A. Waste treatment plant
   Wastes from home, industries, are removed from water, or made harmless.

B. Water purification plant
   Water is filtered and chemicals are added so that it will be clean and pure.

IX. Agribusiness

A. Working with natural resources
1. Air, water, soil
2. Fuels
3. Forests, plants
4. Wildlife

B. Includes everyone who works to grow, process, distribute products that we use for food, clothing and shelter.
1. Processing means changing food or fiber into a product that can be sold for daily use.
2. Distribution is the transporting the processed products to the stores.
3. Equipment and supplies are needed for the farmers to run their business.
4. Professional occupations require a college degree and are highly skilled.

X. Forest Industry

A. Employment
1. 1.75 million people
2. $12.5 billion payroll.

B. Careers
1. Forestry – living and growing trees and uses
   a. Forest management – timber production, public recreation, watershed management, wildlife management.
   b. Related occupation areas
      1. fire protection
      2. pest control → specialist
      3. disease control
   c. Agencies of employment
      1. U.S. Department of Agriculture
      2. U.S. Department of Interior
      3. State Agencies

2. Manufacturing – transform timber into usable, finished products
   a. Products
      1. plywood, particleboard, hardboard – construction
      2. furniture, pulp, paper, paperboard, chemicals
   b. Management for each particular product
   c. Wood technology
   d. Quality control
   e. Engineering
   f. Business occupations
3. Wood Science and Technology – research, product and process development and quality control
   a. Wood Science degree
   b. Wood technology degree
4. Marketing – merchandising a finished product
   a. Salesmen
   b. Economists
   c. Advertising
   d. Publicity
   e. Designers
   f. Artist
   g. Managers
5. Communications – Public Relations
   a. Writer, editors
   b. Government affairs specialists
   c. Economists
6. Teaching – teaching in colleges or two year Vocational Technical School
   a. Forestry school curricula
      1. Forest land management
      2. Forest Engineering – harvesting, transportation
      3. Forest Products – conversion raw materials

XI. Horticultural Occupations
   A. All activities connected with growing, arranging, marketing, and caring.
      1. Flowers
      2. Shrubs
      3. Trees
      4. Grass
   B. Areas of employment
      1. Flower shop
      2. Garden centers
      3. Greenhouses
      4. Nurseries
      5. Botanical Gardens
      6. Golf courses
      7. Public parks
      8. Private estates

Choose a bright future in floriculture!

Join forces with an industry that is on the move! Select a new way of life doing what others do as a hobby. Devote your energies to a product that enhances the quality of our environment.

In a progressively plastic world, flowers and plants provide an essential link between nature and man. Therefore, the demand for them is growing rapidly. As leisure time increases, so will interest and appreciation for plants and flowers.

The future is bright for floriculture. Choose a career that promises a bright future for you!

Varied careers in the expanding floral industry span many important functions, carried out by growers, wholesalers, retailers, educators, scientists, and extension specialists. This billion-dollar industry offers wide opportunity to those who would enjoy helping people express their emotions and creativity through flowers . . . and who would like to help brighten our polluted world with flowers and plants.

Growers

Approximately 12,000 growers are located in every state in the U.S., with 23 states accounting for 90% of the production. Growing establishments range from small operations (including retail-growers who sell what they produce to their own customers) to very large firms which constitute an impressive segment of the agricultural community.

Type of Work

Growers must be adept businessmen and managers, with specialized knowledge of plant and flower behavior; effects of insects and weather; use of light, watering, and nutrition; production costs; prevailing market prices; grading and packing; shipping; marketing; and meeting consumer demand.

Experience and Training

Practical experience can be gained by working in local greenhouses or growing ranges. High school courses in biology, chemistry, vocational agriculture, and business will prove helpful. Flower growing, like every other industry, is becoming increasingly scientific. Those who rise to the top will need college courses in horticulture and business management. Two and four-year courses in floriculture are offered at land grant colleges and other schools.

Wholesalers

Some 900 wholesalers form an important link between growers and retailers. The wholesale florist business, in addition, provides opportunities for several kinds of well-paid specialists including flower brokers, market consultants, buyers, and business managers.

Type of Work

Wholesalers offer a wide variety of flowers, plants, and supplies for sale to retailers. The products of many growers are stocked in a wholesale house, where they are conditioned and readied for selection. Wholesalers must know the current market and the needs of retailers and the public — often necessitating that they locate and obtain products grown in distant areas.

Experience and Training

A good way to start a career in wholesaling is to get a job with a wholesaler — providing an opportunity to learn the routine of the business and to become acquainted with local growers. High school business courses would be helpful, such as bookkeeping, office management, advertising, marketing and mathematics. College courses in business administration and management, plus selected courses from floriculture and marketing often enable more rapid advancement.

Retailers

There are close to 26,000 retailers — over half of whom belong to service organizations through which they transmit orders by phone or wire across the country. Retailers should be proficient as businessmen and as floral artists.

This is a business which can be pursued with a relatively small amount of capital. About 60% of the U.S. shops are operated by husband-wife teams. In addition to traditional downtown shops, an increasing number of shops are springing up in suburban shopping and garden centers.

Type of Work

A flair for creative flower arrangement and usage is important. On the other hand, a sound business foundation is essential for success, including know-how in buying, inventory control, pricing, and other business subjects.

Experience and Training

Flower arranging and other tasks related to operating a flower shop can be learned through working in a retail establishment. Retailers frequently need part-time help during peak buying periods.

Courses in flower arranging are offered by some high schools, colleges, adult education programs, and commercial floral design schools. High school courses in business management and public speaking are helpful to future shop managers or owners. Valuable high school courses in distributive education and diversified occupations have been developed for the floral industry, often enabling students to work in a florist shop as part of their course work. Post-high school courses in business management, floral design, and floriculture better equip students to succeed.

Teaching, Research, Extension Work

The floral industry, like other industries, depends upon research and education for advancement. The many universities where courses in ornamental horticulture are offered provide opportunities for teaching, research and extension work. Here exciting challenges are being met – from development of new varieties to controlling insect pests and prolonging the life of cut flowers. Requirements for positions in these fields parallel those for teaching and research in other areas. Graduate study is generally advisable.

Other highly specialized positions are available to floriculturists in government, public parks, arboretums, conservatories, with seed producers, and as sales representatives for commercial establishments.

Additional Information

The floral industry has this great advantage: there are opportunities for those with little education as well as for those with business or trade school training – or with one or more college degrees. The amount of education needed depends upon where one sets his sights.

Future Opportunities

Many opportunities exist for obtaining firsthand knowledge of the industry – and for deciding if it's the "right" career. Part-time work, particularly at holidays, is available in most parts of the country. For those wishing further training and information:

High School

Guidance counselors can provide more detailed information on preparation for various phases of the floral industry, including distributive education training.

Colleges and Universities

Contact the nearest state or land grant college for information on their courses and entrance requirements. Write directly to the registrar.

Commercial Floral Design Schools

Contact private schools for information on intensive courses in floral design, flower shop management, and merchandising – or write to the Society of American Florists for the names of nearby schools.

Reprint of a pamphlet, "Careers in the Floral Industry," from the Society of American Florists, 901 N. Washington Street, Alexandria, Virginia 22314.

GRAPHIC ARTS

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Graphic Arts

by Edward Price

A. INTRODUCTION

The Graphic Arts Cluster comprises a multitude of careers available to those students who have a basic interest in the field and the drive to learn more about it.

There is a constant demand in the marketplace for graphic artists and this need will not decrease. The purpose of this cycle is to introduce the students to the various levels of careers in the cluster; the training necessary to enter and progress in the career; and the present and projected need for individuals in this area.

Since many of these students choose to enter the work force sooner than their college bound peers, the course is designed to make the student aware of interesting and well paid jobs that he can fill either through training in high school, an apprenticeship program or one or two years of post high school preparation. The hands-on part of the cycle provides the student with an elementary knowledge and some basic experience in the field. Through exposure and minimal performance the student is better able to decide whether or not his future lies in this area.

The course emphasizes advertising and printing in our daily life; offset printing is stressed as the most utilized method today, since many examples of its use can be readily found in the community. Everyday materials, magazine and newspaper, are also used in the course to illustrate the many facets and careers in Graphic Arts.

B. OBJECTIVES

1. The student will be able to identify at least five Graphic Arts Careers and the educational requirements for those careers.
2. The student will be able to list three industries that need the skills of people in the Graphic Arts.
3. After completing two projects the student will have a basic understanding of the following activities and their relationship to specific careers.
   a. Advertising — graphic artists.
   b. Layout — layout artist or paste-up artist.
   c. Illustration and Drawing — graphic artist.
   d. Lettering — compositor and graphic artist.
   e. Printing — press person.

C. UNIT OBJECTIVES AND RELATED ACTIVITIES

UNIT 1: KNOWLEDGE OF CAREERS IN GRAPHIC ARTS and

UNIT 2: INDUSTRIAL DEMAND FOR THE CAREERS

Objective 1: The student will be able to identify at least five Graphic Arts Careers and the educational requirements for those careers.

Objective 2: The student will be able to list three industries that need the skills of people in the Graphic Arts.

Time line: *7 or 8 days.*

Activity 1: Give students pre-test (see section H).

Activity 2: Show part one of the film strip, "Careers in the Graphic Arts"; have students take notes. Stress the major industries that use the graphic artistic related careers:

1. Newspaper
2. Advertising Agency
3. All large companies
4. Food Chains
5. Publishers

Activity 3: Ask students to bring from home magazines to be used in a later discussion on advertising.

Activity 4: Pass out corrected pre-test. Discuss the correct answers with students. Indicate that their grade will be based on the increase in their score from pre to post-test and performance in classroom activities.

Activity 5: Show part two of the film strip, "Careers in the Graphic Arts".

Activity 6: Discuss ideas generated by the film strips. Also use magazines for examples, such as:

a. use of logos by companies
b. the importance of advertising
c. the use of color in advertising
d. the use of different size lettering in advertising
e. the use of photography to sell a product
f. the approach of hard sell advertising versus soft sell advertising
g. the use of art work in advertising

Time line: *1 or 2 days.*

Activity 7: Using examples obtained from a local printer discuss the various stages of offset printing. Examples: metal printing plates, negatives, printed matter, etc.

Step A. The art work or copy is photographed after the layout artist has completed it.
Step B. After the copy is photographed the negative must be developed.
Step C. The negative and the light sensitive printing plate are placed in a special box and exposed to strong arc lights.
Step D. Plate is developed.
Step E. The plate is then put on the roller of the offset printing machine. From there the machine is fed in and paper as it rotates and prints.

WARREN TECH
DESIGN LAYOUT COMPOSITION CAMERA
Graphic Communications
The Daily Advance
Milano guilty
Area doctors to Ford: just stick to politics
Haven sought for battered wives
The Daily A
Milano guilty

Activity 8: Class trip to a Print Shop.

Activity 9: Discuss at least ten basic printing occupations and their educational requirements and salaries with the students. These are jobs that the student has viewed in Activity 2, 5 & 8, as follows:

1. *Estimator* – The individual who estimates the cost of printing a project for the company or agency for which he works. Education: High School Graduate with a good ability in Math. Salary: $2.50 – $3.00 per hour.
2. *Graphic Artist* – The person who uses his imagination and art skills to bring together pictures, designs, color and type to best fit an assigned project. Education: High School Graduate majoring in Art or Vocational Technical High School. Salary: $2.50 – $5.00 per hour.
3. *Proofreader* – The individual who corrects mistakes in copy such as spelling, grammar, and punctuation. Education: At least a high school diploma and excellent skills in English. Salary: $2.50 – $3.50 per hour.
4. *Compositor* – The individual who sets moveable type by hand. In a more sophisticated printing shop the composition would be set on-tape composition machine. The on-tape composition machine looks and operates like a typewriter. Education: Typing and English courses in High School. Must be very precise in spelling, punctuation and grammar. Salary: $3.10 – $4.50 per hour.
5. *Camera Operator* – The individual who operates giant graphic arts camera. The operator must maintain, and in some cases repair, the camera. He must be thoroughly acquainted with camera and the development of films. This photographer makes negatives for a plate maker in the print shop. Education: A high school or post high school graduate of a Graphic Arts Program. Salary: $3.50 – $6.00 per hour.
6. *Plate Maker* – The individual who exposes metal plates to arc lights and develops the plates in chemical solutions. Education: Graphic Art major at Vocational Tech School. Salary: $5.00 per hour.
7. *Press Person* – The individual who operates, maintains and repairs large offset presses. Education: Mechanical Background (Majoring in Mechanical fields in high school), or Graphic Arts major at Vo-Tech. In a large shop previous job experience in an apprenticeship may be required. Salary: $3.20 – $8.00 per hour.
8. *Cutter* – The person in charge of the cutting machines that cut printed material into desired sizes. Education: Graphic Arts major in Vo-Tech High School. Salary: $2.50 – $4.00 per hour.
9. *Binder* – The individual who assembles material and binds it into a book or pamphlet. Education: Graphic Arts major in Vo-Tech High School. Salary: $2.50 – $4.00 per hour.
10. *Foreman* – This person must be able to perform, and have had experience in all the preceding jobs. The Foreman supervises all operations and employees in the shop. Education: Graphic Arts major in Vo-Tech High School and extensive job experience. Salary: $8.00 and up.

All price quotations are from Northwest New Jersey. Prices per hour may be lower or higher in your local area. Entry level wages for the area may be secured from an area technical school, unions, or large print shops which are the best sources for wage information for experienced employees in the Graphic Arts.

UNIT 3: RELATIONSHIP OF BASIC ACTIVITIES TO PARTICULAR GRAPHIC ARTS CAREERS

Objective 3: After completing 2 projects the student will have a basic understanding of the following activities and their relationship to specific careers.

a. Advertising – Graphic Artist.
b. Layout – Layout Artist or Paste-up Artist.
c. Illustration and Drawing – Graphic Artist.
d. Lettering – Compositor and Graphic Artist.
e. Printing – Press Person.

Total Time line: *12 days. (Time – Activities 1 to 4 – 6 or 7 days)*

Activity 1: Refer to film strips and previous discussions about advertising, and assign first project: have students compose an advertisement using their last names as either the company or the product's name.

Activity 2: The student selects a product that has some challenging drawing aspects. The teacher can help the student with illustration of aspects.

Activity 3: The student should do rough drafts of the advertisement before making a final advertisement.

Activity 4: The final ad should be done on heavy paper using available medias such as Tempera, Magic Markers, and inks. Students should use different size lettering to denote words of importance. Color should be used in the same fashion.

Time line: *(Activities 5 to 8b – 5 or 6 days)*

Activity 5: Assign second project.

Activity 6: Following discussion of a logo, have the students design their own logo for a business, product or company.

Activity 7: Have students submit two or more rough drafts of their logo.

Activity 8: The final project should be done on paper using black ink. This project has two parts.

8a. Designing and making the logo.

8b. Printing of the logo. Have students transfer their logo to a 3" x 4" linoleum block, then have them cut them out with linoleum cutters and print them in a simple press.

These projects have been taken from the Teachers Guide on "Careers in the Graphic Arts" which also contains other selected projects you may use.

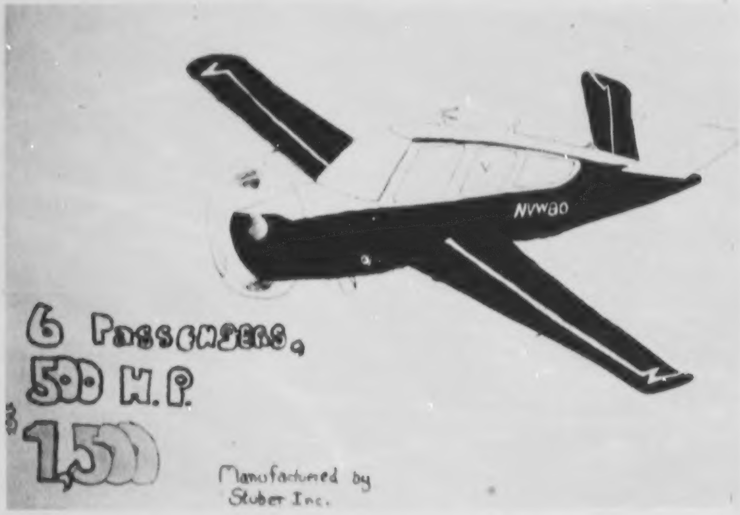
Notes to Teachers

The projects directly relate to the following occupations:

Project 1: Relates to the Graphic Artist, Layout Artist, and Proofreader.

Project 2: Relates to the Plate Maker and Press Person. Without sophisticated equipment, actual jobs cannot be duplicated in the classroom. Only in a Graphic Arts Shop or at a Vocational High School can ALL these jobs be simulated.

The quality of the final projects varies with the interest and ability of the student. The teacher must keep in mind that only a small segment of these students will elect to enter the Graphic Arts field. The average Art teacher, accustomed to teaching the more motivated student, should keep in mind that expertise is not the object of this 22 day cycle but rather exposure to Graphic Arts.



UNIT 4: SUMMARY ACTIVITIES

Time line: *3 days.*

Activity 1: Guest speaker – Shop Foreman of a local printshop.

Activity 2: Ask for student feedback on the course. Have students evaluate themselves and classmates: Who would do well in this cluster? Why would they not wish to go into Graphic Art? etc.

Activity 3: Post Test.

D. BASIC CAREERS IN GRAPHIC ARTS

1. Estimator
2. Graphic Artist
3. Proofreader
4. Compositor
5. Camera Operator.
6. Plate Maker
7. Press Person
8. Cutter
9. Binder
10. Foreman

Additional Careers for Supplementary Activities

1. Silk Screener
2. Photo Engraver
3. Etcher
4. Engraver (Fine Arts)
5. Woodcutter (Fine Arts)

E. GLOSSARY OF TERMS

Plates – any material for use in printing. Plates can be made of cardboard, metal, etc.
Linoleum Blocks – a soft and easily cut block used originally for floor covering.
Offset Printing – a type of printing in which inked rollers print on paper.
Proof – a printing matter ready fof inspection.
Negative – a sheet of light sensitive plastic film which, when exposed to arc lights, gives a positive print on a printing plate.
Camera – light tight box with a lens and shutter that exposes the film to light images.
Pamphlets – A book containing a few pages, bound together with a soft cover.
Binding – this is the stitched and glued part of the book or pamphlet that holds it together.
Copy – subject matter, whether manuscript or printed, that is to be put into type or plates.
*Consult pages 85-89 of "Opportunities in Graphic Communications" (see section G) for more terms.

F. RESOURCES

I. Media

1. Tempera paint or poster paint – $2.25 pint jar.
2. Color inks – $5.25 for six color sets.
3. Color magic markers – $.59 each.

II. Other Medias

1. Speedball advanced set for lettering.
   a. Speedball classroom teaching kit for lettering covers twelve students, price $33.50.
2. For printing logos.
   a. 3" x 4" backless linoleum blocks, $.42 each.
   b. Speedball water soluble inks, 4 oz. tube $1.25.
3. Speedball linoleum cutter set, $2.05 per set.
4. Hammetts block printing press model B, $14.75.

All prices quoted from 1976 catalog, J. L. Hammett Co. Vaux Hall Road, Union, New Jersey.

G. BIBLIOGRAPHY

I. Books

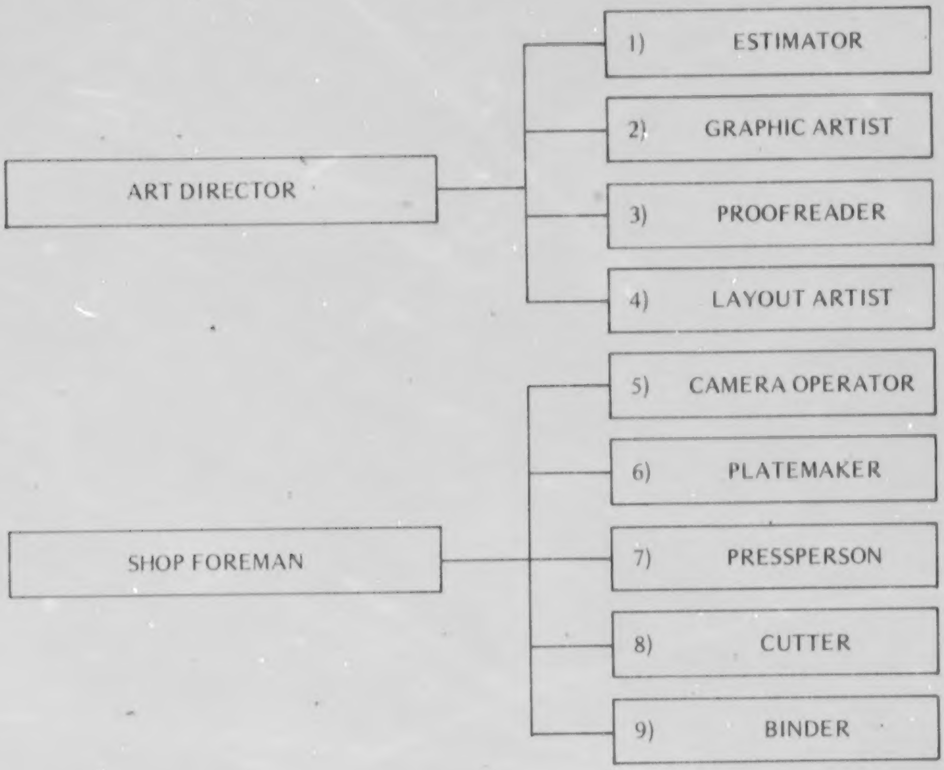
A. "Opportunities In The Graphic Arts", by R. A. Ballinger Vocational Guidance Manuals, Universal Publishing Corporation, New York, $1.95.
B. "Opportunities In Graphic Communications", by G. Reinfeld, Jr., Vocational Guidance Manuals, Universal Publishing Corporation, New York, $1.95.
C. "Exploring Occupations In Communication and Graphic Arts", by J. R. Schirel, R. H. Jenkins, McGraw-Hill Book Company, New York, $2.95.

II. Film Strips

A. "Careers In The Graphic Arts" Part I, Part II, Teachers guide, Educational Dimensions Corporation, Box 146 Great Neck, N.Y. 11023 – Cost $46.00 – #415.

H. STUDENT MATERIAL FOR DUPLICATION

CAREERS AND PRODUCTION STAGES OF OFFSET PRINTING


ART DIRECTOR
1) ESTIMATOR
2) GRAPHIC ARTIST
3) PROOFREADER
4) LAYOUT ARTIST
SHOP FOREMAN
5) CAMERA OPERATOR
6) PLATEMAKER
7) PRESSPERSON
8) CUTTER
9) BINDER

GRAPHIC ARTS PRE-POST TEST

1. Graphic artists are responsible for designing logos for companies. T____ F____
2. Newspapers, magazines and advertisors rely on skilled Graphic artists. T____ F____
3. Bindery is not part of the Graphic Arts. T____ F____
4. Offset type of printing is the major type of printing in the printing industry. T____ F____
5. Taking art courses in high school is beneficial for a job in the graphic arts. T____ F____
6. The average work week is 30 hours. T____ F____
7. Name five job occupations in the Graphic Arts field.
   a. ____________________
   b. ____________________
   c. ____________________
   d. ____________________
   e. ____________________
8. List the educational requirements for being a Graphic Artist.
9. Give the average salary of:
   a. Compositor ____________
   b. Plate Maker ____________
   c. Foreman ____________
   d. Graphic Artist ____________
10. Name three types of industry that need Graphic Artists.
    a. ____________________
    b. ____________________
    c. ____________________

GRAPHIC PROJECT

Select one of the following projects for an illustrated ad. You will do the drawing of the object and compose an eye-catching advertisement. State what facts you think are very important about the product. Remember – the purpose of an advertisement is to *SELL.*

1. Car
2. Perfume
3. Soap detergent
4. Boat
5. Watch
6. Clothes
7. Stereo equipment
8. House
9. Vacation Trip
10. Food
11. Motor cycle
12. Mini Bike
13. Snowmobile
14. Fire Arms
15. Make-up
16. Jewelry
17. Services: such as, Carpenter; electrician etc.

You may select another product that is not listed on this page.

HEALTH CAREERS

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Health Careers

by Dolores Vanderburg

A. INTRODUCTION

Students need to be guided toward making better occupational choices. Without a broad exposure to many careers, students often make hasty and unwise decisions about their futures. Guided properly, student selections will result from experimental judgement rather than a lack of knowledge. The teacher should keep in mind that a negative choice by a student is as important as a positive choice.

Many opportunities exist today in the Health Careers for specialized manpower, which plays a significant role in the growing community health needs. Opportunities are diverse and virtually unlimited. Each career involves different skills, talents and interests. Each offers its own rewards, challenges and personal satisfactions.

Throughout the United States, in laboratories and clinics, private offices and hospitals, neighborhood schools and large universities, men and women in the health occupations are at work. Though the positions they hold and the jobs they do differ greatly from one another, they all have the same aim: to help protect people from illness and pain.

The Health Careers segment of WORK-ED is taught to ninth grade students on a twenty-two day cycle and is designed to assist them in making career choices.

The school nurse is the staff member best qualified to teach in this career area because of both her professional skills and background in school health services, and also her knowledge of hospitals and community health services and personnel. She is usually acquainted with, and has a working relationship with, other professionals in the health field in the community.

The course is designed to create student awareness of the broad range of health occupations, by introducing the wide variety of available careers, ranging from those that have direct contact with people to careers in research, etc., and indirectly related job opportunities. The student is made aware of the high school courses required to enter various health careers.

Each health occupation is listed in an outline format that includes: a description of the work involved, personal qualifications of the worker, employment opportunities, working conditions, financial and personal rewards and future outlooks. In this cycle, students will learn through "hands-on" activities how to take blood pressure, temperature, pulse and respiration, and the use of the audiometer, biopter (or other vision tester), dental plaque disclosure, and throat culture methods. The hands-on experience gives the student a cursory knowledge of the various health careers rather than any in-depth expertise in any one area. Field trips and guest speakers are included in the program.

B. COURSE OBJECTIVES

1. Students will be able to list at least five health care services available to the consumer. They will be aware that out of every 100 people in the health care field, eighty-nine are *not* physicians.
2. Students will be able to recognize the personal attributes and attitudes necessary to deal with others in the health field. They will be able to distinguish the various professionals working within the field of vision.
3. All students will be able to name at least four health careers available in the laboratory, and state educational requirements for each. Since laboratory procedures and techniques are essential in the medical field, the student will work with realistic concepts.
4. Students will be aware of the rewards and advantages of a career in rehabilitation and will be able to indicate the personal and educational requirements necessary to become a physical and an occupational therapist.

5. The students will be able to list the educational background of the dentist as well as the dental hygienist and dental assistant.
6. The students will be able to identify the educational requirements of the registered nurse and the licensed practical nurse, and be able to demonstrate at least one hands-on experience in this field.
7. The students will be acquainted with basic facts concerning the personal and educational requirements, as well as the training and courses recommended to become an EKG (electrocardiograph) Technician.
8. Students will be aware of the need for people in health careers whose services are performed indirectly for the patients.
9. Students will be acquainted with various terms used in the health professions and the educational requirements and responsibilities of its members.

UNIT 1: DIVERSITY OF HEALTH CAREERS

Objective 1: Students will be able to list at least five health care services available to the consumer. They will be aware that out of every 100 people in the health care field, eighty-nine are *not* physicians. (Medical-Surgical procedures rely on many people with varied training and varied skills.)

Time line: *2 days.*

Activity 1: Health Careers Pre Test (see section H).

Film: "Is A Career In The Health Services For You?" 15 min. An overview of the health service to help young people make their educational career plans. The film takes a look at the nature of the work and at the conditions in a great variety of health occupations. It urges young people to investigate career opportunities.

or

"Horizon Unlimited". 28 min. A worthwhile but dated film (a second choice).

Discussion of film. Allow students an opportunity to compare thoughts and feelings concerning health occupations and perhaps their plans for the future. Students make a list of five health services.

Assignment: Students bring to class clipped newspaper articles pertaining to health careers and Want-Ads indicating opportunities.

Activity 2: Students share and discuss newspaper articles.

UNIT 2: ATTRIBUTES AND ATTITUDES

Objective 2: The students will be able to recognize the personal attributes and attitudes necessary to deal with others in the health field. They will be able to distinguish the various professionals working within the field of vision.

Time line: *4 days.*

Activity 1: Film: "The O.D's – Vision Care Specialists." 15 min. Optometrists and optometric students describe the interesting aspects of their profession. Research work is mentioned and the optometrist's role in correcting children's learning disabilities is emphasized.

Discussion of film.

Students list the educational requirements for the Optometrist, Ophthalmologist and Optician. *Careers In Health*, pp. 46-47 (see section F).

Activity 2: Guest Speaker: An Ophthalmologist, Optometrist, or an Optician.

Questions and answer period. Students can pose questions and discuss the availability of jobs, requirements, and problems which may be encountered.

Activity 3: Hands on vision screening, using the biopter, titmus tester or other screening device. Students become familiar with terms used in vision screening. Example: acuity, hyperopia, myopia; peripheral vision, etc.

Activity 4: Discussion of the personal attributes and attitudes necessary to deal with patients.

UNIT 3: LAB CAREERS

Objective 3: All students will be able to name at least four health careers available in the laboratory and state educational requirements for each. Since laboratory procedures and techniques are essential in the medical field, it is important that the student work with realistic concepts.

Time line: *3–4 days.*

Activity 1: Film: "In A Medical Laboratory", 28 min. Film shows how the laboratory team works together to track down the causes of a disease. It stresses the importance of standards in training and describes the different levels of responsibility. Occupations covered include pathologist, medical technologist, cyto-technologist, histologist technician and laboratory assistant.

Discussion of film and educational requirements for laboratory careers. *Careers In Health*, pp. 74, 75, 76.

Activity 2: Field trip to a local hospital. A guided tour can be arranged through the Public Relations Dept. of the hospital. (Class time and one or two periods to allow sufficient time for the tour).

Activity 3: Discussion of the field trip.

Do a throat culture on a student volunteer and explain the procedure. (As described in Community Control of Streptococcal Disease: Manual for school nurses). Since the student's strep culture will probably be negative, it is advisable to have a positive culture available for comparison.

UNIT 4: REHABILITATION CAREERS

Objective 4: Students will be aware of the rewards and advantages of a career in rehabilitation and will be able to indicate the personal and educational requirements necessary to become a physical and an occupational therapist.

Time line: *4 days.*

Activity 1: Film: "Someone Who Cares," 11 min. This film offers the student an excellent exposure to the duties of the physical therapist.

Discussion of film and requirements for the physical therapist and physical therapist-assistant.

Activity 2: Hands On! demonstration: How to measure crutches to fit the patient properly and methods of using them. (Careers in *Focus* pages 100 thru 112).

Activity 3: Set up activities designed to allow the student an opportunity to appreciate the need for the occupational therapist.

Examples: Tie a shoe lace with one hand.
Peel a potato with one hand.
Put on a shirt with one hand (Careers in *Focus* pp. 118-122).
Other activities may be used for demonstration.

Activity 4: Full day trip to a Rehabilitation Center for students interested in Physical and Occupational Therapist.

UNIT 5: DENTAL CAREERS

Objective 5: The student will be able to list the educational background of the dentist as well as the dental hygienist and dental assistant.

Time line: *3 days.*

Activity 1: Film: "Where I Want To Be – The Story of a Woman Dentist." 28 min. A motivational and interesting film which offers students a look at the personal and professional life of a woman in dental school. A different approach!
Discussion of film.

Activity 2: Guest Speaker. A dentist and/or assistant or hygienist.
Question and answer period.

Activity 3: Use the plaque light and disclose solution to demonstrate on volunteer students the need for good dental hygiene. Instruction and demonstration of proper use of dental floss. Careers in *Focus* pp. 34-42.

UNIT 6: NURSING CAREERS

Objective 6: The students will be able to identify the educational requirements of the registered nurse and the licensed practical nurse, and be able to demonstrate at least one hands-on experience in this field.

Time line: *3 days.*

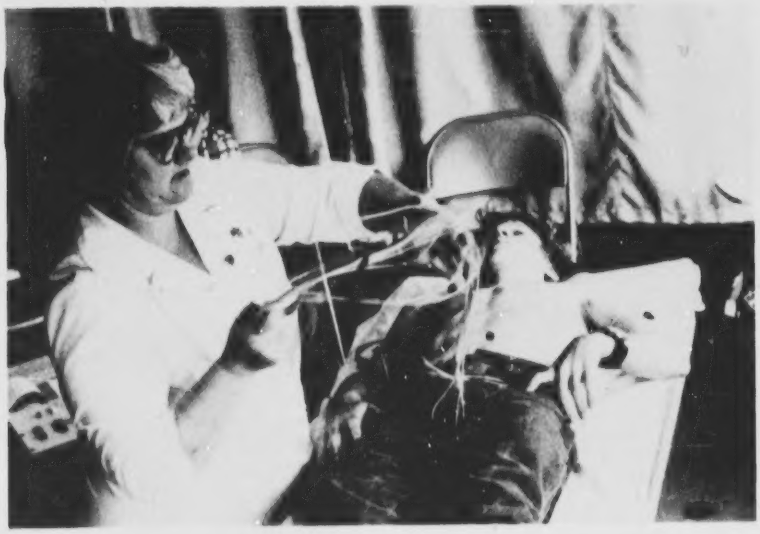
Activity 1: Film: "People Who Help." 28 min. This film creates the atmosphere of a modern hospital. It also introduces the student to many of its key personnel who reflect, as they work, on what rewards and problems they meet each day.
Discussion of film.
Students list job opportunities for both males and females which exist in the nursing field.

Activity 2: Hands On. Students practice taking temperature, pulse and respiration on each other. Careers in *Focus* pp. 49, 50, 51.

Activity 3: Hands On. Students learn how to take blood pressure, and the terms associated with this activity. Careers in *Focus* pp. 52-55.

UNIT 7: ELECTROCARDIOGRAPHY TECHNICIAN

Objective 7: The students will be acquainted with basic facts concerning the personal and educational requirements as well as the training and courses recommended to become an EKG (electrocardiograph) Technician.



Time line: *1 day.*

Activity 1: Guest Speaker: Hospital EKG Technician
Students have an opportunity to ask questions regarding salaries and duties. The technician does an electrocardiogram on one or two male students (it is required that the subject strip to the waist) and explains the results.

UNIT 8: RELATED HEALTH CAREERS

Objective 8: Students will be aware of the need for people in health careers whose services are performed indirectly for the patients.

Time line: *1 day.*

Activity 1: Role Play: Admitting the patient to the hospital. Set up a classroom situation in which students portray the various personnel necessary for admitting a patient, i.e. Admitting Officer, Ward Clerk, etc.
Discussion of the required courses to qualify in this field.

UNIT 9: TERMINOLOGY

Objective 9: Students will be acquainted with various terms used in the health professions and the educational requirements and responsibilities of its members.

Time line: *1 day.*

Activity 1: Post Test.
Discussion of test and comparison of Pre and Post responses to questions.

D. HEALTH CAREERS IN CLUSTER

1. Ophthalmologist
2. Optometrist
3. Optician
4. Lab Technician
5. Pathologist
6. Lab. Assistant
7. Physical Therapist
8. Occupational Therapist
9. Dentist and Specialties
10. Dental Hygienist
11. Dental Assistant
12. Registered Nurse
13. Licensed Practical Nurse
14. EKG Technician
15. Admitting Officer
16. Ward Clerk

E. GLOSSARY OF TERMS

Acuity – 20/20 vision.
Bacteriology – Study of bacteria.
Blood Pressure – The pressure existing in the large arteries at the height of the pulse wave.
Cardiogram – A graph that measures heart beats.
Decibel – Pitch when testing hearing.
EEG–Electroencephalography – Amplification, recording, and analysis of the electrical activity of the brain.
EKG–Electrocardiogram – A record of the electrical activity of the heart.
Hygiene – The study of health and observance of health rules.
L.P.N.–Licensed Practical Nurse.
Throat Culture – A test for Strep-Throat.
98^6 – Normal temperature.

F. RESOURCES

Blackboard, chalk, eraser
Posters – *Available free from:* Spenco Medical Corp., P.O. Box 8113, Waco, Texas 76710
Newspapers, for ads and articles
Thermometer – one for each student
Watch or clock with sweepsecond hand – wall clock can be used or teacher can time activity
Scale, for measuring height and weight
Biopter (alternate) Titmus tester or other vision tester
Audiometer
Sphygmomanometer
Stethoscope
Agar plates, Iso-discs, Bacitracin discs and dispenser, incubator
Plaque light and disclosing solution
Pamphlets – *Available free from:* AHA Health Careers Series, American Hospital Association, 840 Lake Shore Drive, Chicago, Ill. 60611
Hospital Technicians
Dentist or dental personnel
Ophthalmologist, Optometrist, or Optician
Physical therapist
Sanitarian or Health Officer

If a fairly large room in the health suite can be used as a classroom, it would provide a convenient area to conduct an informal class, thereby enabling the nurse to be readily available for student emergencies. Students can be seated in a semi-circle or arranged in small working groups, which creates a more comfortable atmosphere for open discussion rather than the conventional classroom.

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5. *Introduction To Allied Health Careers – Teachers Manual*, New Jersey Vocational – Technical Curriculum Laboratory, Rutgers University 4103 – Kilmer Campus, New Brunswick, N.J. 08903, 1975.
6. Ruth Love Halloway, Elaine H. Stowe, *Hello World!*, (Health Services) Field Education Publications, New Jersey, 1973.
7. Career World. *The Continuing Guide to Careers.* Curriculum Innovations, Inc., 501 Lake Forest Ave., Highwood, Illinois, 60040 (Sept.–May) $3.25 – per student (min. 15 students).

Visual Aid Index

1. "Someone Who Cares". National Audiovisual Center (color) – (11 min.) General Services Administration, Washington, D.C. 20409 – Free
2. "Intern: A Long Year". Britannica Films (color) – (20 min.) $11.00 per day.
3. "Where I Want To Be – The Story of a Woman Dentist." Division of Dental Health, Health Resources Administration, U.S. Dept. of Health and Welfare – Free

   "Bright Future." American Dental Assoc. Bureau A-V Service, (color) – (28 min.), 211 East Chicago Avenue, Chicago, Ill. 60611 – Free
5. "A Life In Your Hands." West Glen Films, 565 Fifth Ave., New York, N.Y. 10017 (color) – (20 min.) Loaned for Preview.

6. "People Who Help." B.F.A. Educational Media, 788 Columbus Ave., New York, N.Y. 10025 (color) – (20 min.) – Loaned for Preview.
7. "Horizons Unlimited." Modern Talking Pictures Service, 315 Springfield Ave., New Jersey 07901 (color) – (28 min.) – Free
8. "O.D.'s the Vision Care Specialists." Motion Picture Service, P.O. Box 252, Livingston, N.J. 07039 (color) – (15 min.) – Free
9. "In A Medical Laboratory." American Cancer Society, Court House Annex, Belvidere, N.J. (color) – (28 min.) – Free
10. "Career In Bacteriology." Becton, Dickinson and Company, Advertising and Sales Promotion, Rutherford, N.J. 07070 – (color) – (20 min.) – Free
11. "Is A Career In The Health Services for You?" Warren County Vision Aids Commission, RD1, Box 253, Oxford, N.J. 07863 – (color) – (15 min.) – Free

H. STUDENT MATERIAL FOR DUPLICATION

PRE AND POST TEST

(indicates correct answer)*

1. Inhalation therapy is used primarily in the treatment of:
   *a. Heart and lung ailments
   b. Brain injuries
   c. Patients who have had abdominal surgery
   d. Amputations

2. An inhalation therapist uses which of the following pieces of equipment:
   a. Oxygen mask and tent
   b Nasal catheter
   c. Respirator
   *d. All of the above

3. An electrocardiograph can reveal problems with the:
   a. Legs and arms
   b. Brain
   *c. Heart
   d. Stomach

4. An EKG Technician needs how much preparation beyond high school?
   *a. Less than one year
   b. Two years of training
   c. Two years of college
   d. A bachelors degree

5. The head of the X-ray team is a:
   a. Nurse
   b. X-ray Technician
   *c. Radiologist
   d. Nuclear Technician

6. EEG testing by the technician involves instruments that survey the:
   a. Lung
   b. Heart
   *c. Brain
   d. Legs

7. The training for an EEG technician career is
   a. 4 years
   b. 2 years
   *c. 3-6 months
   d. 1½ years

The education required to become a dental hygienist is:
   a. One year of study in an accredited school of dental hygiene and one year of internship with a dentist.
   *b. Two years of study in a recognized school of dental hygiene.
   c. On-the-job training for two years with a dentist.
   d. A four year college diploma and a year of dental school.

9. Define what we are testing when we use the terms *systolic* and *dyastolic*:

10. List at least five careers in health and their educational requirements.
   1. 4.
   2. 5.
   3.

STUDENTS QUESTIONNAIRE

NAME: ______________________________ SCHOOL: ____________________

ADDRESS: ____

Listed below are some positions in the Health Field you might consider. If you have further interest please indicate with a check (√) which one and return to your guidance counselor or health careers chairman after this tour. These fields will be explored outside the Hospital by appointment.

PROFESSION	DESCRIPTION	For More Information
Audiologist and Speech Pathologist	Five years of college prepares you to help children and adults handicapped in process of communication. You work with people having problems as stuttering, lisping, impaired hearing, helping them to communicate in as nearly normal a fashion as possible.	
Dental Assistant	High School plus a minimum of on-the-job training prepares you to serve as a dentist's receptionist and secretary; prepare dental patients for examination, treatment or surgery; sterilize instruments; and in some offices you may prepare solutions, mix fillings and cement, and assist with x-rays.	
Dental Hygienist	High School plus a minimum of two years additional study prepares you to clean teeth and chart conditions of decay and disease for diagnosis by the dentist, and to provide dental health education on the techniques of mouth care and on proper diet.	
Dental Laboratory Technician	High School plus on-the-job training prepares you to make dentures including teeth, crowns, bridges, and orthodontic appliances as specified by a dentist.	
Housekeeper	High School plus on-the-job training prepares you to supervise work activities of cleaning personnel to insure clean facilities.	
Health Educator	A minimum of 4 years of college prepares you to assist government and voluntary health agencies in planning, conducting and evaluating programs which improve and maintain health in the local community.	
Medical Illustrator	Two years of college plus two years additional study prepares you to make models and sketches illustrating medical findings for use in publications, exhibits, consultations, research and teaching.	
Occupational Therapist	Four years of college prepares you to select and direct educational, vocational, and recreational activities designed to meet the specific rehabilitation needs of mentally or physically disabled.	

STUDENTS QUESTIONNAIRE (Continued)

PROFESSION	DESCRIPTION	For More Information
Optician	High School plus on-the-job training prepares you to grind eyeglass lenses to prescription specifications and assemble lenses in frames. Also you may assist customers in choice of frames and fit frames to customers.	
Optometrist	A minimum of 2 years of college and 4 years of optometry school prepares you to examine the eyes to determine the presence of vision problems, disease. You prescribe eyeglasses, contact lenses and eye exercises or other treatment that does not require drugs or surgery.	
Orthoptist	High School plus a minimum of 2 year college and one year of training prepares you to work with children and adults who need training in coordinating the use of their eyes. Working under the supervision of an opthalmologist, the orthoptist uses various corrective machinery and teaches patients appropriate eye exercises.	
Osteopathic Physician	A minimum of 3 years of college and 4 years of osteopathy school prepares you to diagnose, prescribe for and treat diseases of human body, paying particular attention to impairments in the musculo-skeletal system.	
Pharmacist	Five years of college prepares you to understand the composition, use and effect of drugs. You may mix and dispense drugs.	
Podiatrist	A minimum of 2 years of college and 4 years of podiatry school prepares you to diagnose and deformities of the feet.	
Prosthetist and Orthotist	High School plus on-the-job training prepares you to make and fit orthopedic braces to support weakened body parts or correct physical defects.	
Sanitarian	Four years of college prepares you to enforce regulations concerned with food processing and serving, and collection and disposal of solid waste; and advise civic and other officials in development of health laws and regulations.	
Sanitary Engineer	4 Years of college with civil or sanitary engineering courses prepares you to work with government or industry in providing and maintaining safe water supplies; protecting lakes, rivers, and oceans from contamination, and reducing pollution of air and water.	
Veterinarian	A minimum or 2 years of college and 4 years of veterinary school prepares you to treat sick and injured animals and prevent outbreak and spread of disease.	

HOME ECONOMICS CAREERS

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Home Economics

by Mary Bartz

A. INTRODUCTION

This cycle acquaints the students with the broad scope of employment opportunities in the field of home economics and related occupations. The students become aware of the kind of work they might enjoy and the skills required. The cycle is divided into four units: food service and preparation, clothing and textiles, home economists in education and business, hospitality and recreation.

Since students are likely to enter jobs in the home area, it is important that they learn about the job opportunities there. In the Hackettstown area, business activity has increased with the advent of major food concerns and a variety of franchise national food service and home economics businesses. Added to these are a community hospital and several nursing homes in town. For this reason, a good part of the cycle is devoted to exploring the career opportunities in the area of food service and preparation.

The town's location between two major resort areas, with resultant job opportunities in the hospitality and recreation area, warrants the study of the cluster on hospitality and recreation careers related to home economics to our students. The cluster of clothing and textiles is also explored because of the proximity to New York and the location of several large apparel and textile plants in the area.

This description of the community demonstrates how this cycle can be adjusted to any community. The length of time given to each unit can be increased, decreased or eliminated, depending on the communities' employment opportunities.

Field trips are planned whenever possible to enable the students to see and talk to people working in the home economics field. In addition, each student is required to interview a professional in an area of home economics and write a report. Since the most valid source of information about the duties, educational requirements, and life style involved in an occupation is a worker in that field, the interview can best reveal to the student what an occupation is really like. Employed workers who are successful in their jobs also serve as effective models for the students.

The 22 days are divided as follows:

Day 1 – 4	Introduction to the Home Economic careers and Home Economic-related occupations.
5 – 16	Food Service and Preparation
17 – 18	Clothing and Textile
19	Interior Design
20	Home Economists
21 – 22	Hospitality and Recreation

B. OVERALL COURSE OBJECTIVES

1. The student will develop a knowledge of the multitude of jobs available in the area of home economics.
2. The student will become aware of changing sex roles in home economics: the student will learn that stereotypical sex roles for specific occupations are not necessarily valid.
3. The student will be able to list the educational requirements for the careers in each of the home economics clusters.
4. The student will be able to define his/her own abilities, interests, and attitudes in home economics.
5. The student will experience hands-on exploratory activities which are related to occupations in the area of home economics and which are designed to simulate on-the-job experiences.
6. The student will be aware of job opportunities in the area of home economics in the community and surrounding areas.

C. HOME ECONOMICS CAREERS

UNIT 1

Objectives:

1. The students will be able to define in writing the term "home economics".
2. The student will be able to list four home economic career clusters:
    - a. Clothing and textiles
    - b. Food service and preparation
    - c. Hospitality and recreation
    - d. Home economists in education and business
3. The students will be able to define in writing the following terms: entry level, career ladder, vocational education, career, on-the-job training, fringe benefits, life style, career clusters, job title, minimum wages.
4. The student will become aware of the duties, working conditions, and life style involved in one home economic-related occupation.

Objective 1: The students will be able to define in writing the term "home economics".

Objective 2: The student will be able to list four home economic career clusters: 1) clothing and textiles; 2) food service and preparation; 3) hospitality and recreation; 4) home economists in education and business.

Time line: *1 day.*

Activity 1: Give a brief overview of the course to the students. Outline the topics to be covered and the requirements for the cycle.

Activity 2: Distribute notebooks (or require students to bring in a notebook for the next day). These notebooks are kept by the teacher and given out at the beginning of each class period. Give each student several copies of the job description worksheet for their notebooks (see appendix G). Explain that they must fill in one of these sheets for each career discussed. These notebooks will be used to review for the post-test and will be retained by the student when the cycle is over.

Activity 3: Discuss the requirements for the interview report. Allow two to three weeks for completion. The following topics should be covered:

1. Job Title
2. Name of person and title
3. Place of employment
4. Duties (give as much detail as possible)
5. Salary and fringe benefits – working hours
6. Educational requirements and/or qualifications
7. How they got the job (ad in newspaper, friends, employment office, etc.)
8. Chances for advancement
9. Do they like their job? (Try to get as much information as possible to explain answer).

Activity 4: Ask the students what they think home economics is all about. Write their ideas on the board. Discuss their comments. Develop a working definition of home economics using the student's words as much as possible. Write in notebook.

Activity 5: List the clusters of home economics that they will be studying. Write in notebook.

Activity 6: Discuss changing sex roles and explain how these changes are also giving men an opportunity to work in areas that were once considered "women's job," and vice versa.

Activity 7: Give the pre-test. Explain to the students that this will not be part of their grade but will serve as a guide to the teacher for the course. The students should be encouraged to answer questions as best they can. The test should be corrected and saved to compare with their post-test.

Objective 3: The students will be able to define in writing the following terms: entry level, career ladder, vocational education, career, on-the-job training, fringe benefits, life style, career clusters, job title, minimum wages.

Time line: *1 day.*

Activity 1: Discuss the following terms — Ask students to define them. Write the definitions on the board for the students to copy in their notebook. Use the student's words as much as possible.

a. entry level
b. career ladder
c. vocational education
d. career occupation
e. on-the-job training
f. fringe benefits
g. life styles
h. career clusters
i. job titles
j. minimum wage

Objective 4: The student will become aware of the duties, working conditions, and life style involved in one home economic-related occupation.

Time line: *2 days.*

Activity 1: Give a brief quiz (10 min.) on the terms discussed the previous day.

Activity 2: Introduce the film strip "Jobs for You: It's Happening in Home Economics" from Guidance Associates (Introduction on page 4-5 of discussion guide).

Activity 3: Show the film strip to the students. (20 min.)

Activity 4: Return corrected quizzes. Briefly review definitions, especially those defined poorly by the students.

Activity 5: Discuss the film strip shown the day before using the questions for group discussion on pages 9 and 10 of the accompanying publisher's discussion guide.

Activity 6: Compile a list on the board of local home economic job opportunities, such as McDonalds, local furniture stores, etc.

UNIT 2: FOOD SERVICE AND PREPARATION

Objectives:

1. The students will be able to list in writing two jobs for each level of the career ladder (entry, intermediate, and management) of food service.
2. The students will become aware of the number of job opportunities in the food service area by listing the places of business in the local area which prepare and serve food. This will encompass the range from fast food services to gourmet cuisine.
3. The students will be able to list and briefly describe three careers in the area of cooking and list the educational requirements for each career.
4. The students will be able to list the duties of the following: waiter/waitress, bartender, busboy, cashier, host/hostess.
5. The students will be able to enumerate at least four jobs in the fast food service industry.
6. The students will be able to list and briefly describe the duties of three occupations in food management and supervision.
7. The students will be able to define in writing the terms dietitian and food technologist.
8. The students will be able to list and briefly describe the duties of four occupations in the bakery industry.
9. The students will be able to list three advantages and three disadvantages of working in the bakery industry.
10. The students will be able to list and briefly describe three jobs in the bakery industry: baker, delivery worker, assistant baker.
11. The students will be able to list three duties of a baker.

Objective 1: The students will be able to list in writing two jobs for each level of the career ladder (entry, intermediate, and management) of food service.

Objective 2: The students will become aware of the number of job opportunities in the food service area by listing the places of business in the local area which prepare and serve food. This will encompass the range from fast food service to gourmet cuisine.

Time line: *1 day.*

Activity 1: Introduce the food service occupations. Give each student a copy of "Careers for Youth in the Food Service Industry". Read this booklet with the students. Stress main facts, assign for re-reading at home, and introduce the film strip.

Activity 2: Show the film strip "Food Service: A Career to Consider" (10 min.).

Activity 3: Discuss the film strip. List the jobs depicted in the film strip on the board. Have the students copy this list. Discussion should include:

a. establishments where food is served
b. kinds of people needed
c. qualifications — personal and educational
d. general working conditions
e. opportunities for part-time employment
f. businesses in area which prepare and/or serve food

Objective 3: The students will be able to list and briefly describe three careers in the area of cooking and list the educational requirements for each career.

Time line: *1 day.*

Activity 1: Show film strip "Chefs and Cooks" (4 min.). Show this film several times. It is very short and quick and takes several showings for the students to absorb the contents.

Activity 2: Discuss the difference between a cook and chef.

Activity 3: Discuss the following occupations; have students complete the job description worksheet for each: chef-cook, assistant cook, cook's helper, short order cook. If time allows, other jobs may be reviewed such as salad maker, pastry chef, fish chef, sauce cook, vegetable cook.

Activity 4: Visit the school cafeteria kitchen to observe the equipment, working conditions, and procedures.

Objective 4: The students will be able to list the duties of the following: waiter/waitress, bartender, busboy, cashier, host/hostess.

Time line: *1 day.*

Activity 1: Discuss the following occupations: waiter/waitress, bartender, cashier, host/hostess, busboy. Have the students complete a job description worksheet for each.

Activity 2: Discuss the custom of tipping and how it affects wages and service.

Activity 3: Using a sample menu, have students role play an interaction between a waiter or waitress and customer. Using a sample check, have the waiter total the bill. The customer will add the tip.

Objective 5: The students will be able to enumerate at least four jobs in the fast food service industry.

Time line: *2 days.*

Activity 1: Visit a local fast food service business.

Activity 2: Discuss the field trip. Include the following:

a. jobs available
b. wages — benefits

c. working conditions
d. training
e. chances for advancement

Activity 3: Compare these jobs to those in a sit down food service restaurant. Have students discuss "If you had a choice, in which type of business would you rather work?"

Objective 6: The students will be able to list and briefly describe the duties of three occupations in food management and supervision.

Time line: *1 day.*

Activity 1: Discuss the following occupations:
a. restaurant manager
b. food production manager
c. personnel director
d. caterer

Have students complete a job description worksheet for each.

Activity 2: Have students plan a menu for a catered party. Cookbooks and magazines can be used to give them ideas. Give them some guidelines, for example: The affair is to be a graduation party for 50 people. The customer wants at least three different kinds of sandwiches, salads, relishes, two kinds of beverages and at least two choices of dessert. OR – Have the students make a tray of tea sandwiches. The students will plan the fillings, (encourage the students to be as creative as possible), prepare the sandwiches, eat them and evaluate the results. (This will probably take two days).

Objective 7: The students will be able to define in writing the terms dietitian and food technologist.

Time line: *3 days.*

Activity 1: Discuss the following occupations: 1) dietitian; 2) food technologist. Have students complete a job description sheet for each. Have the students read "Food Science and Technology – A Career for You". Have them fill in the job description worksheet from the information in the booklet.

Actiivty 2: Visit a local hospital dietitian.

Activity 3: Discuss the field trip. Include the following information in your discussion:
a. jobs available and training period
b. salaries – benefits
c. working conditions

Activity 4: Have students prepare a menu for a patient on a regular diet. The menu should include at least two choices in each of the following catagories: soup, salad, bread, protein dish, vegetables, desserts, beverages, salad dressings, and bread spreads.

Objective 8: Baking Industry – The students will be able to list and briefly describe the duties of four occupations in the bakery industry.

Time line: *1 day.*

Activity 1: Discuss the baking industry. The following ideas should be included: retail bakery, head baker, assistant, mass production bakery, delivery workers, inspectors, advantages and disadvantages of ownership in the bakery business.

Activity 2: Discuss the following occupations: baker, assistant, mixers, dividers, molders, inspectors, delivery workers. Have students complete a job description worksheet for each.

Objective 9: The students will be able to list three advantages and three disadvantages of working in the bakery industry.

Time line: *2 days.*

Activity 1: Have students bake a cake from "scratch". While the cake is baking, have students compute the cost for the cake (include frosting). How much would they have to sell the cake for if they wanted to make a 50-cent profit? How much would they have to charge per slice to make the same profit at a cake sale if they could get 12 slices from the cake?

Activity 2: Discuss the additional cost a bakery owner would have, such as electricity, etc. OR – (If you have time and a highly motivated group), have the students bake cookies for a cookie sale. Have the students 1) find the recipe, 2) compute the cost per cookie, 3) decide how many cookies will be needed to reach profit goal which they will set (keep this realistic), 4) plan on a time schedule for preparation, bake-off and sale, 5) decide how profits will be used, and 6) decide what jobs will be needed, e.g. baker, etc. and have students sign up for the jobs.

Before you start this project check with your school administration for permission and if possible use the school kitchen for the actual preparation and bake-off. This project will take four to five days.

Activity 3: Give a 20 minute test on the material covered in the food service and preparation area.

Activity 4: Have the students frost and eat the cake they made the day before.

UNIT 3: CLOTHING AND TEXTILE INDUSTRY

Objectives:
1. The students will be able to list four jobs in the clothing and textile industry.
2. As a result of participation in a simulated production operation, students will be able to list five advantages and five disadvantages in clothing and textile production.

Objective 1: The students will be able to list four jobs in the clothing and textile industry.

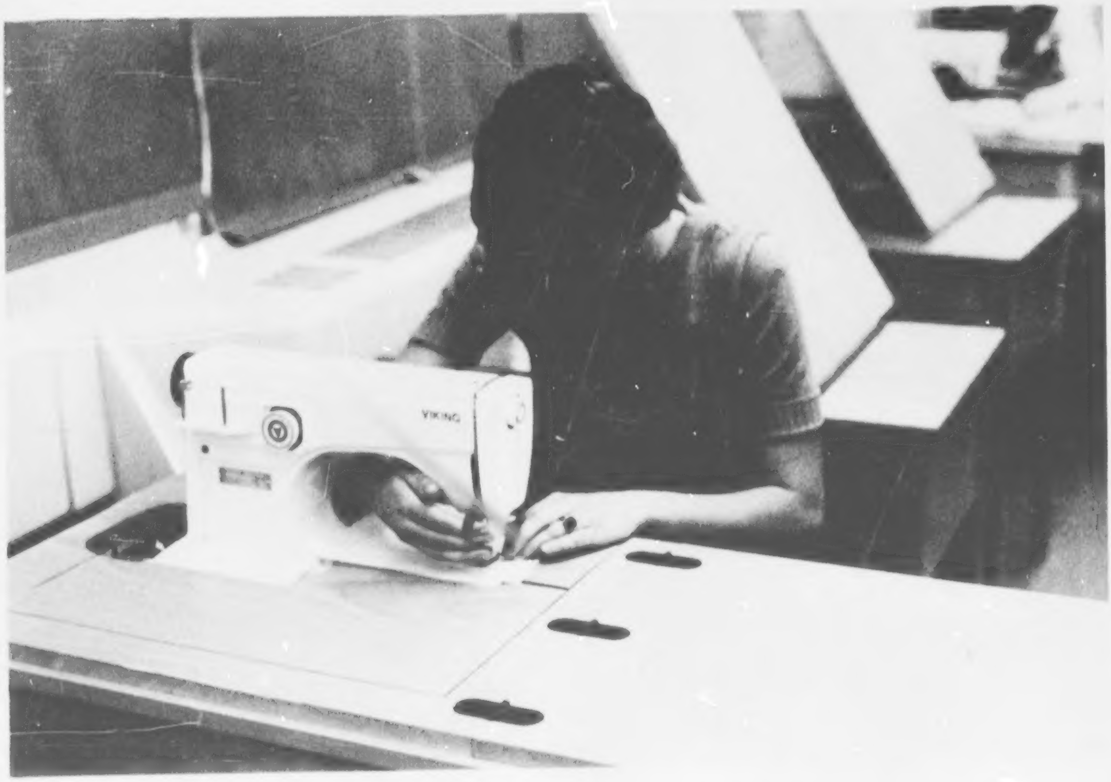
Time line: *1 day.*

Activity 1: Discuss the clothing and textile industry. List the job opportunities in this industry on the board. The list might include some or all of the following:*

piece work employee
model
quality control
presser
bundlers
production coordination
interior designer
designer
cutters
tailors
pattern maker
inspectors
dressmaker
print designer
salesman
upholsterer
machine operators
finishers
sewing machine operator

*See resources – "Occupational Mini Briefs"

Activity 2: Discuss the following occupations: model, pattern maker, sewing machine operator, tailor, apparel designer. Have students complete a job description worksheet for each. If time: cutter, presser, spreader.



Objective 2: As a result of participation in a simulated production operation, students will be able to list five advantages and five disadvantages in clothing and textile production.

Time line: *1 day.*

Activity 1: Students will "weave" a textile design. Give each student a pre-slit piece of thin cardboard 6" x 8" (slits 1" apart on top and bottom) and pre-cut strips of colored construction paper 1" x 6". Demonstrate how to weave by alternating first "over one", then "under one". Encourage the students to create a pattern by using different colored paper strips. OR – Have students work on a "production line". Ditto off paper on which you have drawn a design such as a shirt front. Assign students to sewing machines (do not thread machines). Each student is assigned one part of the design to sew and must complete this section and send the design down the production line to the next student, etc. It is a good idea to set a production figure. OR – Ditto off a design such as a Christmas tree (depending on the season) and have the students "sew" the design following the lines. Give them a production number they must reach in order to get a certain grade for the day. For example they must complete 10 trees in 30 minutes to receive an A for the day. The sheets must be "inspected" by you or a student assigned to the job and must meet standards you have set.

UNIT 4: INTERIOR DESIGN

Objectives:
1. The students will be able to list four duties of an interior designer.
2. The students will be able to list three qualities and/or abilities needed by a person to work in the area of interior design.

Time line: *1 day.*

Activity 1: Discuss the careers in Interior Design. Have students fill out a job description sheet. Homework or, if time, in class: students will read "Design and Decoration" pages 20-22.

Activity 2: Using "New Dimensions in Living" have students design a room. Directions are included in the pamphlet.

UNIT 5: THE HOME ECONOMIST IN EDUCATION AND BUSINESS

Objectives:
1. The student will be able to list four personal qualifications which are necessary for the home economist.
2. The student will be able to list four job opportunities in each of the following areas: education, business, consumer service.

Time line: *1 or 2 days.*

Activity 1. Introduce filmstrip "The People Profession: Careers in Home Economics". Preview the film strip and use the introduction on page three of the accompanying publisher's discussion guide.

Activity 2: Show the film strip.

Activity 3: Discuss the film strip. Include the following ideas in the discussion:*

a. Types of businesses in which home economists are employed.
b. What is a home economist?
c. Salary ranges
d. Personal qualifications
e. The home economist in education
f. The home economist in consumer affairs.
g. Opportunities for men as well as women in home economics careers.
h. The home economist and child care.

*Discussion guide contained with the film strip.

Activity 4: Homework or an additional classroom activity. Have students read the article "Home Economics Careers" on pages 6-16 in "Career World", October 1975 issue.

Additional Activities

1. Visit a home economist working for a local utility or have him/her visit your school.
2. Visit an extension worker or have him/her visit your school.

Additional activities for an advanced class or for students who plan to attend college:

1. View film strip: "Careers in Consumer Affairs"
2. Visit the home economics department at a nearby college.

UNIT 6: HOSPITALITY AND RECREATION

Objectives:

1. The students will be able to list eight occupations within the cluster of hospitality and recreation.
2. The students will be able to list two advantages and two disadvantages of working in this area.

Time line: *2 days.*

Activity 1: Discuss hospitality and recreation careers. Explain the growing need for people in this area because of increased leisure time and travel. Have students name as many occupations as they can. List them on the board. (Preview the film and make a list of occupations in the Hospitality and Recreation field.)

Activity 2: Show the film "Is a Career in the Hotel/Motel Industry for You?"

Activity 3: After viewing the film, list any additional occupations that were depicted in the film. Have students copy this list in their notebooks.

Activity 4: Continue discussion of the film shown the previous day. Include the following:

a. The list of occupations
b. working conditions
c. advantages — e.g. opportunity to relocate, travel, etc.
d. disadvantages — night shifts, etc.
e. qualifications — educational requirements

Activity 5: Give post-test. Correct test, compare results with pre-test.

Additional Activities

Activity 6: Read "Popeye and Hospitality and Recreation".

Activity 7: Read "Popeye and Personal Services Careers".

D. LIST OF CAREERS IN HOME ECONOMICS CLUSTERS

FOOD SERVICE AND PREPARATION

waiter/waitress
busboy
personnel director
dividers
cook's helper
restaurant manager
caterer
mixer
delivery worker
short order cook
assistant cook
dietitian
inspectors
bartender
food production manager
food technologist
molder
cook, chef
host/hostess
assistant baker
baker
cashier

CLOTHING AND TEXTILE INDUSTRY

piece work employee
production coordinator
apparel designer
tailor
model
interior designer
pattern maker
presser
cutter
sewing machine operator

HOME ECONOMIST IN EDUCATION AND BUSINESS

dietitian
early childhood educator
teacher
consumer representative
extension worker

HOSPITALITY AND RECREATION

housekeeper
chambermaid
recreation personnel
bell boy
front desk personnel
bell captain
room clerk
switchboard operator
food service personnel

E. RESOURCES

Audio visual kit

Facts About Food Service, Procter and Gamble Educational Services, PO Box 14009, Cincinnati, Ohio 45214 – $2.75

Booklet

"Careers for Youth in the Food Service Industry" – Free

"Career World" – The Continuing Guide to Careers, Volume 3, No. 2, October 1974.

"Future Unlimited in Executive Housekeeping", The National Executive Housekeepers Assoc., Inc., Second Ave. Gallipolis, Ohio 45631 – Free

"Careers in Home Economics", Career Associates, PO Box 2316, Newport Beach, CA 92663 – $12.00 for 10 copies.

Film Strips

"Food Service: A Career to Consider", Audio/Visual Vocational Guidance Kit, National Institute for the Food Service Industry, 120 S. Riverside Plaza, Chicago, IL 60606 – $5.50/kit.

"Is a Career in the Hotel or Motel Business for You?" Library of Counseling Films, 1973, 2100 Locust St., Philadelphia, PA 19103.

"Careers in Consumer Affairs", Butterick Publishers, 4 film strips and cassettes – $56.00.

"Cooks and Chefs", Encyclopedia Brittanica Series, 4 minutes – $22.00.

"Jobs for You: It's Happening in Home Economics" & "The People Profession: Careers in Home Economics", Guidance Associates.

Pamphlet

"Food Science and Technology – A Career for You", The Institute of Food Technologist, 221 N. LaSalle St., Chicago, IL 60601 – Free

"New Dimensions in Living", Southern Furniture Manufacturers Association, PO Box 951, High Point, NC, 27261 – Free

Comic Book

"Popeye and Consumer and Homemaking Careers." "Popeye and Hospitality and Recreation Careers." "Popeye and Personal Service Careers." King Features, 235 E. 45 St., New York, NY 10017 – 1-25 copies for 25-cents each.

Kit

Occupational Awareness Program Mini-Brief, Occupation Awareness, Box 5098, Los Angeles, CA 90055 – Packets: Homemaking – $8.15; Clothing – $11.30; Food – $12.65.

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McDermott, Irene and Norris, Jeanne. *Opportunities in Clothing.* Bennett Books, 809 W. Detweiller Drive, Peoria, IL 61614. 1974.

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Your Future as a Dietitian. American Dietitian Association. Rosen Press, 29 E. 21 Street, New York, NY 10010. 1970.

Your Future as a Home Economists. Rosen Press, 29 E. 21 Street, New York, NY 10010, 1970.

Your Future in Fashion Design. Fashion Group ed. Rosen Press, 29 E. 21 St. New York, NY 10010. 1970.

Your Future in Restaurants and Food Service. Rosen Press, 29 E. 21 Street, New York, NY 10010. 1970.

G. STUDENT MATERIAL FOR DUPLICATION

JOB DESCRIPTION WORKSHEET

Job Title:

Educational requirements:

Personal qualifications:

Duties:

Salary:

Number of hours:

Working conditions:

Advantages:

Disadvantages:

HOME ECONOMICS PRE-POST TEST

1. ______ The food service industry is the third largest in the U.S.
2. ______ There are not many job openings in the food service industry.
3. ______ A busboy helps cook.
4. ______ There are no set educational requirements for busboys.
5. ______ Busboys have no chance for advancement.
6. ______ About two out of every waiters and waitresses work part-time.
7. ______ A waiter or waitress must have plenty of energy.
8. ______ A waiter or waitress must have a good memory.
9. ______ Beginning waiters and waitresses must go to a special school.
10. ______ The average salary for a waiter is about .60 to $1.80 per hour.
11. ______ One duty of a restaurant manager is to direct the work of all employees.
12. ______ There are more woman restaurant managers than men.
13. ______ A restaurant manager usually needs at least a college education.
14. ______ A chef is in complete charge of a kitchen.
15. ______ A short order cook usually works in a restaurant where only one cook is employed.
16. ______ Cooks are not in great demand.
17. ______ Cooks who graduate from vocational schools do not have a very good chance to advance.
18. ______ Chefs can earn as much as $15,000 a year.
19. ______ Mechanical skills are not needed by an automatic vending routeman.
20. ______ You need a high school diploma to be a routeman.
21. ______ Most routemen work 40 hours per week.
22. ______ Stewards and stewardess' main duty is to take care of the airline passengers.
23. ______ Minimum education requirements for stewardnesses is graduation from high school.
24. ______ Stewards and stewardnesses do not need any special education.
25. ______ There are catering off-premise and on-premise.
26. ______ There are not many job opportunities for hotel workers.
27. ______ Completion of grade school is preferred for unskilled jobs in hotels.
28. ______ Maids are usually among the lowest paid of all hotel workers.
29. ______ A bell captain is in charge of all the bellmen in the hotel.
30. ______ The dining car waiter's job includes taking customer's orders and serving food.
31. ______ Food store checkers have many opportunities for advancement.
32. ______ A necessity for bakery workers is good health.
33. ______ A baker has the opportunity to become self-employed.
34. ______ A person needs at least a college degree to become a food technologist.
35. ______ The dairy industry is the largest section of the foods industry.
36. ______ The full-time retail sales people work about 40 hours per week.
37. ______ Retail sales in clothing pay about the lowest salaries of all retail selling jobs.
38. ______ To be a professional home economist you need a four year college degree.
39. ______ A bachelor's degree is just an entry level education for a dietitian.
40. ______ To be an interior designer you would need a two or a four year college program in this field.
41. ______ Most fashion designers are college graduates who major in art or specialize in design.
42. ______ Earnings for clothing manufacturing workers are based directly on production.
43. ______ About ¼ of the people employed in the clothing industry are women.
44. ______ Almost all sewing machine jobs are held by men.
45. ______ Sewing machine operators are usually trained in special schools.
46. ______ More jobs are opening up for women in the upholstered furniture industry.
47. ______ Spotters work in the dry cleaning business.
48. ______ Appliance servicemen have a chance to make extra money by doing overtime work.
49. ______ To work in a laundry you usually do not need a high school diploma.

PART II

Name four (4) areas in the career field of home economics.

1.
2.
3.
4.

Name six (6) opportunities in the food service industry.

1.
2.
3.
4.
5.
6.

The ______________________ industry is the third largest in the U.S.

Name four (4) duties of a hospital dietitian.

1.
2.
3.
4.

Name five (5) job opportunities in the clothing and textile industry.

1.
2.
3.
4.
5.

Appendices

COMMUNICATIONS PRE/POST TEST FOR ALL STUDENTS.

PRE/POST TEST SCORING

All questions are worth 2 points with the exception of question 24 which is 10 points and question 32 which is 4 points.

September	Pre/Test
June	Post/Test

PRE/POST TEST-COMMUNICATIONS

1. Values are of importance through life. T F
2. The following are important factors in a career choice: interests, aptitudes, abilities, personality. T F
3. If you can get onto a habit of reading the Help Wanted sections in your local newspapers, you will learn quite a bit about the job market. T F
4. You will not need a Social Security card until you have worked for ten months. T F
5. Nicknames are preferred on application forms. T F
6. Writing a good letter is important only if you are going to work in an office. T F
7. It is important to get along with your boss, not your fellow workers. T F
8. Your net income is less than your gross income. T F
9. People form opinions of us very quickly. T F
10. People's opinions of us is greatly conditioned by our appearance and speech mannerisms. T F
11. There are few ways of changing our careers once we make a choice. T F
12. Our life style preference should be considered when choosing a career. T F
13. The main character is the
    a. antagonist
    b. protagonist
    c. the author
14. The character presenting the conflict is:
    a. antagonist
    b. protagonist
    c. the author
15. The setting of a story means:
    a. time
    b. place
    c. time and place
    d. characters
16. The story line is called:
    a. setting
    b. plot
    c. theme
17. The highest point or turning point of the action is:
    a. conclusion
    b. climax
    c. introduction

18. The general feeling or atmosphere in a story is:
    a. setting
    b. mood
    c. action

19. A resume is required:
    a. for all jobs
    b. for part-time jobs
    c. for most professional jobs
    d. for federal workers

20. A Want-Ad that states fee paid, means:
    a. You pay 10% of your salary to the agency.
    b. The agency pays for your placement.
    c. The employer pays for your placement.
    d. You pay one week's salary.

21. On an employment application, the word marital status refers to:
    a. How many dependents you declare.
    b. Whether or not you are going in the armed services.
    c. Whether or not you are married.
    d. Whether or not you are going to college.

22. "Gd/skls" means:
    a. Can you ski?
    b. You must be a good scholar.
    c. You should know how to type and take steno well.
    d. You must be religious.

23. Gal/Guy Friday refers to:
    a. A job as a messenger.
    b. A person who would perform all duties in the office.
    c. A person who works on Saturday instead of Friday.
    d. A person who prefers working with both men and women.

24. Define 10 of the following:
    a. Bi-lingual
    b. Dependents
    c. Clk, types
    d. W. P. M.
    e. P/T – F/T
    f. Adm. asst.
    g. Sls/Retail
    h. exp.
    i. resp./therapist
    j. Workmens Compensation
    k. Felony
    l. Social Security
    m. W4 form
    n. F.I.C.A.
    o. Union
    p. Entry level job
    q. Apprenticeship

25. You would look for employment at (names)
    a.
    b.

26. The average full-time work week is:
    a. 40 hrs.
    b. 20 hrs.
    c. 50 hrs.
    d. 30 hrs.

27. In a job interview it is important:
    a. To ask questions.
    b. To be very friendly.
    c. To be dressed neatly.
    d. To be cool.

28. In a full-time job, the average length of paid vacation is:
    a. two weeks
    b. two months
    c. one week
    d. 12 days

29. Retirement age is usually:
    a. 65
    b. 70
    c. 60
    d. 67

30. A social security card is necessary:
    a. in case you are arrested.
    b. to pay a hospital bill.
    c. in order to collect benefits for you or your dependents.
    d. in order to obtain a drivers license.

31. ______________ is the idea of making plans for more than one future career. (A. Career decisions, B. Job Prospects, C. Career options).

32. When you are researching a career, four of the most important things to look up are:
    1. ______________ 3. ______________
    2. ______________ 4. ______________

33. In writing, the art of choosing words accurately and precisely is called ______________ . (A. Diction, B. Composition, C. Narration).

34. ______________ , ______________ , and ______________ are three good examples of career areas which require oral communication skills.

35. A ______________ professional worker is one who works closely with a professional worker. (A. Semi, B. Para, C. Non).

36. Benefits, such as paid vacations and medical insurance given in addition to salary and wages are called "______________ benefits".

37. ______________ and ______________ are two good examples of career areas which require good writing skills.

38. A paragraph which sticks to its topic is said to have good ______________ . (A. Coherence, B. Development, C. Unity).

39. ______________ of the average person's lifetime is spent at or involved in work. (A. 1/2, B. 1/3, C. 1/4).

40. Without ______________ you cannot accept yourself as being a person of worth. (A. a T.V., B. Money, C. Self-respect).

41. If you expect a full days pay, you must give ______________ . (A. Money, B. Leisure activity, C. A full days work).

42. The first step in choosing your career is to set some lifestyle goals based on ______________ . (A. Friends, B. Values, C. Family, D. Money).

43. If you are successful on your part-time job, you will have a valuable ______________ from your employer when you are ready for a full-time job. (A. Recommendation, B. Locket, C. Salary).

EVALUATION SHEET
WORK-ED
Student Questionnaire

1. Did you have any future career plans when you were in eighth grade?
2. Do you have any future career plans at this time?
3. Do you like Communications and Careers?
4. Has Communications and Careers helped you to decide upon a future career cluster or career?
5. Do you know more about careers and the world of work than you did when you were in eighth grade?
6. Have your career plans changed since the eighth grade?
7. Has Communications and Careers had any influence on your career plans?
8. Would you advise a friend to take Communications and Careers?
9. What was most valuable to you in Communications and Careers?
10. What changes do you feel should be made in Communications and Careers?

WORK-ED
Teacher & Counselor Questionnaire

ATTITUDE

1. As a result of WORK-ED do you think your students are *actively participating* in the process of making a career choice?

2. As a result of WORK-ED do you think your students have developed more *positive attitudes* towards work and the *values* they place upon work?

3. As a result of WORK-ED do you think that your students have developed more *independence* in *decision making* towards the choice of an occupation?

4. As a result of WORK-ED do you think that your students have developed a preference for career choice factors in choosing an occupation? Do they consider interest and potential rather than chance or training in the career choice?

5. As a result of WORK-ED do you think that your students have developed more accurate *conceptions* about making a *career choice*?

COMPETENCE

6. As a result of WORK-ED do you think that your students are more competent in their *self appraisal* regarding their career choices?

7. As a result of WORK-ED do you think that your students have gained more *occupational information*?

8. As a result of WORK-ED do you think that your students are better able to *select* a career *goal*?

9. As a result of WORK-ED do you think that your students are better able to *plan* for their future career?

10. As a result of WORK-ED do you think that your students are better equipped to solve the *problems* of career selection?

COMMUNITY SURVEY

1. Do you feel that every student should have the opportunity to analyze pertinent data about himself and about potential occupational fields?
   ( ) Yes ( ) No
2. Many "tools" for career guidance use are available today. Some of these are available in our own district; but there is a feeling that they are not given maximum use because there is no carefully-thought-out plan for their use. Do you agree?
   ( ) Yes ( ) No
3. Do you feel that the career guidance needs of this district's students are being met?
   ( ) Exceptionally well ( ) Fairly well ( ) Presently unsatisfactory
4. Do you think that a student's high school program should be based in part upon his career goal?
   ( ) Yes ( ) No
5. Rank the following career guidance activities (1, 2, 3 etc.) according to how effective you think they would be:
   _____ a. Do assigned library reading on whatever career fields interest the student.
   _____ b. Listen to a record about a particular occupation.
   _____ c. Interview a person who is working in the field of interest at his place of work.
   _____ d. Try out an occupation through exploratory (non-paid) work experience.
   _____ e. Taking and reviewing the results of aptitude tests.
   _____ f. Taking and reviewing the results of interest tests.
   _____ g. Having available pamphlets on a variety of occupations.
   _____ h. Guest speakers from various career fields.
   _____ i. Exposure to careers by the classroom teacher.
6. At what grade in school should a student become involved in a structured program of career guidance?
   ____
7. Do you feel that the most effective of these should be incorporated into a plan in which every student would have an opportunity to be exposed to them?
8. Please describe what you feel should be the objective of career guidance:
9. Please make any other comments which will help in the planning for an improved program of career guidance for this district.

"Credit Where It's Due"

Considerable attention ought to be directed toward the theory of Hackettstown High School Principal Robert Lehr that the school's WORK-ED program should be credited with declines in dropouts, vandalism, and absenteeism.

If the program continues to enjoy its current success, it should be given a place among the permanent facets of our educational system.

For some time it has been acknowledged that many youths should not go to college, and that many who do go find themselves in the wrong field and waste one or more important and expensive years getting themselves pointed in the right direction. WORK-ED and the related program gives them a chance to try their wings a bit before committing themselves to a direction. It allows for some practical experience at an age at which the youth has little else to go on.

WORK-ED sounded like a good idea when it was started. Thus far, it has lived up to its early promise.

—*Hackettstown Gazette*

Project WORK-ED

A Career Education Program for Ninth Graders

Hackettstown High School
Hackettstown, NJ 07840

Dissemination Services & Materials Available
January 1977

Introduction

The WORK-ED Program was developed at Hackettstown High School and has been validated by the standards and guidelines of the U.S. Office of Education as successful, cost-effective and exportable, and funded as a Demonstration Site for the 1976-77 School Year. In cooperation with the Hackettstown Board of Education, the administration and staff at Hackettstown High School and the Division of Research, Planning and Evaluation, New Jersey Department of Education, the project staff has developed a dissemination plan to offer materials, training, and consultation to interested educators as described below. The cost of all awareness sessions, training and follow-up consultation is proveded free of charge to all interested educators within the State of New Jersey ESEA Title III-IV (C) program. Additional information may be obtained from the project director, Virginia A. Fraleigh, Hackettstown High School, Hackettstown, NJ 07840.

Awareness Level Activities

A technical brief which gives an overview of the project, a brochure describing its development and evaluation results, and an order form describing the project materials are available free of charge. The project staff is available to give orientation presentations on the program and its dissemination plan. It is suggested that interested parties in other states coordinate a presentation with the dissemination work of their state's ESEA, Title III State Dissemination Facilitator and/or ESEA, Title III-IV (C) Coordinator.

Involvement Level Activities

Visitors are welcome to Hackettstown High School where they may see the program in action, talk to the project staff and students, and examine the program materials. To arrange visitations please contact the project director.

Commitment Level Activitias

Educators who wish to implement the program are asked to contact the project director at least two months before the date that training sessions are desired.

A Producer-Consumer Agreement specifies the training and follow-up consultation offered by the project staff and the commitment and planning required of potential adopters to be eligible for training. This agreement may be obtained from the project director and should be completed and returned by those districts who wish to make arrangements for training.

PROJECT WORK-ED

World of Related Knowledge and Educational
Development - Hackettstown

Project WORK-ED is a career-education course of study for 9th graders designed: to make non-college bound students aware of the many careers available; to enable them to evaluate their own interests and abilities with respect to future goals; and to qualify them to make appropriate choices among high school courses in preparation for their careers.

Introduced into the curriculum of Hackettstown High School, in New Jersey, in September of 1974 as Communications and Careers with funds provided by the Elementary and Secondary Education Act, Title III-IVC, the program was developed with a pilot group of 100 students, most of whom had experienced academic, behavioral and attendance problems in elementary school. The rationale for the target populati was that success with this group would ensure success with all ninth graders. One year later, in September 1975, project WORK-ED was validated as innovative, successful, cost effective and exportable according to the standard and guidelines of the U.S. Office of Educat It is currently funded for dissemination by ESEA Title III-IV-C, in cooperation with the Division of Research, Planning & Evaluation of N.J. Department of Education.

Communications and Careers is a daily two-period course comprisin two major components, as implied in the title: an area of basic skil in communications, and an area of information and experience in career clusters.

The Communications area emphasized skill proficiency in teaching communications skills necessary to survive and to succeed in the worl of work. The students spend one marking period (one quarter of the year) with each of four English teachers to cover all aspects of communications with emphasis upon four: human values, reading, oral skills, and general writing and practical communication skills. In sum, the communications area details those skills necessary to researc prepare for, obtain, and keep a job.

The second component area of the course stresses exposure to eigh separate career clusters taught by industrial arts and classroom teachers whose purpose is to make students aware of the varied career available to them in each area. The more exposure the student experiences, the wider his career choices will be. In groups of 12, to encourage individualization, the 9th graders are cycled through eight career clusters for 22 school days each: Agriculture, Home Economics, Business, Graphic Arts, Health Careers, Drafting, Wood Sho and Career Guidance. In Career Guidance, the students are made aware of their own interests, abilities and future goals, through testing, group and individual counseling, and career research.

In the other career clusters, activities cover a wide range: th students receive hands-on-experience, go on field trips to various community industrial sites, visit area technical schools available fo them to attend part-time or full-time during their high school and post high school years, view career films, and interact with communit guest speakers from all career clusters. Pre and post career awarene inventories are conducted in each career cluster.

In its brief period of attempting to help students answer their questions of "Who am I", "Where am I going", the program has effected positive reactions from the school administration, teachers, parents, and most importantly, the students themselves. Evaluation of the program indicates that students find high school more relevant as indica by: less disruptive behavior, decreased drop-out rate, decrease in vandalism, decreased truancy, and decreased absenteeism.

The 9th grade program is an outgrowth of an on-going program for 11th and 12th grade students started two years earlier with 300 stude but not as yet validated. Here, the classroom is extended into the world of work: The students select career areas of interest, observe and participate in their chosen field, work with a cooperating professional in the community who, together with the student, evaluates the student's performance. Thus the student secures a hands-on-exper ence in a potential career field before embarking upon post high school studies or chosen occupations. The 9th grade program arose from the recognition of the need for earlier decision-making.

Project WORK-ED has great applicability for all ninth graders in a three-fold manner: it stresses skill proficiencies needed by stude to secure and maintain jobs; it exposes them to careers available in their communities and in the world, many of which would be otherwise unknown to them; and it enhances their own feelings of self-worth in its aspects of values clarification. In addition, the opportunities for work study in the 11th and 12th grades, an extension of this validated component, enable students actually to experience careers in further determination of their life's work.

The project staff has prepared a curriculum manual, administrato manual and student workbook, available at cost in the fall of 1976. The school will be funded by ESEA Title III-IV-C as a demonstration site where interested educators may see the program in operation and talk to participating students and staff. Training (2 days) and follow-up consultation will be offered free of charge to staffs of adopting districts in New Jersey which must include an administrator, guidance counsellor, and one teacher from each of at least 5 career clusters. Inquiries about the project, its materials, and dissemination services should be directed to the project director:

Virginia A. Fraleigh
Director, WORK-ED
Hackettstown High School
Hackettstown, NJ 07840
(201) 852-2800, ext. 36

PROJECT MATERIALS

The curriculum materials listed below have been developed by WORK-ED, Hackettstown High School, and are available at cost.

WORK-ED, A Curriculum Manual for Teachers

A comprehensive curriculum guide for teachers detailing twelve courses of study; Four Communication courses: Values Clarification, Writing Skills, Reading Skills, and Oral Skills; and eight separate Career courses in Agriculture, Home Economics, Business, Graphic Arts, Health Careers, Drafting, Carpentry, and Career Guidance. Each course of study includes behavioral objectives, activities to achieve these objectives, a suggested time line, resources, bibliography, pre/post tests, and student material for duplication.

186 pages
cost $7.50

WORK-ED, Administrator's Manual

A manual for the administrator or coordinator who will be responsible for implementing the program in a school district. This manual details all information and strategies necessary to achieve the program's goals including: objectives, rationale, needs assessment, start up costs, staff involvement, training, monitoring, community involvement, and evaluation. The appendix includes samples of all written materials necessary to implement WORK-ED and a bibliography. (This manual will be ready for distribution January, 1977).

approx. 50 pages
cost $5.50

WORK-ED, A Program Overview

A color sound filmstrip with cassette explaining the goals, objectives, and strategies of the program. This filmstrip is recommended for use with the Board of Education, teachers, parents, and other community personnel and for future use in training teachers coming into the program after its implementation. (This product will be available on November 1, 1976).

cost $12.00

ORDER FORM

NAME____

ADDRESS____

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Quantity	Item	Price	Amount

Checks or purchase order should accompany order.
Please make payable to: WORK-ED, Hackettstown Board of Education

Please mail check or order form to
Project WORK-ED
NJ State Department of Education
Project Center
225 West State Street
Trenton, NJ 08625

EDUCATIONAL PROGRAMS THAT WORK - A TECHNICAL BRIEF

- GUIDANCE BASED CAREER EDUCATION CURRICULUM
- 9TH GRADE STUDENTS
- BASIC SKILLS IN COMMUNICATIONS
- EXPERIENCE IN CAREER CLUSTERS
- COMMUNITY RESOURCES
- DISSEMINATION PLAN

WORK-ED
WORLD OF RELATED KNOWLEDGE AND
EDUCATIONAL DEVELOPMENT
Hackettstown, New Jersey 07840

ESEA

DIVISION OF SCHOOL PROGRAMS
NEW JERSEY STATE DEPARTMENT OF EDUCATION
June, 1977

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Commissioner's Endorsement

By providing ninth grade students with basic skills in communication and with exposure to many career clusters, Project WORK-ED has made a significant contribution to the education of high school students as they make critical choices for their future careers. On behalf of the Department of Education, State of New Jersey, I therefore commend it to educators, parents and students throughout the nation.

Fred G. Burke

Fred G. Burke
Commissioner of Education
State of New Jersey

WORK-ED
WORLD OF RELATED KNOWLEDGE AND EDUCATIONAL DEVELOPMENT

Hackettstown, N.J.

OVERVIEW

Project WORK-ED is a year long guidance based career-education course of study for 9th graders, designed: to make non-college bound students aware of the many careers available; to enable them to evaluate their own interests and abilities with respect to future goals; and to qualify them to make appropriate choices among high school courses in preparation for their careers. The need for this program arose from society's demands for more specialized training for careers, thus necessitating earlier decision making and preparation by students.

WORK-ED is a daily two-period course comprising two major components: an area of *basic skills in communications,* and an area of information and experience in *career clusters.*

The *Communications* area emphasizes *skill proficiency* in communications necessary to survive and to succeed in the world of work.

The students in groups of 20-24, spend one marking period (one quarter of the year) with each of four English teachers to cover all aspects of communications with emphasis upon four: human values, reading, oral skills, and general writing and practical communication skills. In sum, the communications area details those skills necessary to research, prepare for, obtain, and keep a job.

The *Careers* area stresses *exposure* to eight separate career clusters taught by industrial arts and classroom teachers who attempt to make students aware of the varied careers available to them in each area. The more exposure the student experiences, the wider his career choices will be. In groups of 12, to encourage individualization, the 9th graders are cycled through eight career clusters for 22 school days each: Agriculture or Environmental Science, Home Economics, Business, Graphic Arts, Health Careers, Drafting, Wood Shop, and Career Guidance. In Career Guidance, the students are made aware of their own interests, abilities, and future goals through testing, group and individual counseling, and career research.

In the other career clusters, activities cover a wide range: the students receive hands-on-experience, go on field trips to various community industrial sites, visit area technical schools available for them to attend part-time or full-time during their high school and post high school years, view career films, and interact with community guest speakers from all career clusters. Pre and post career awareness inventories are conducted in each career cluster.

Project WORK-ED has great applicability for school districts with large populations of non-college bound students in urban as well as rural areas, in a threefold manner: it stresses skill proficiencies needed by students to secure and maintain jobs; it exposes them to careers available in their communities and in the world, many of which would be otherwise unknown to them; and it enhances their own feelings of self-worth in its aspects of values clarification.

Introduced into the curriculum of Hackettstown High School in September of 1974, funded by ESEA Title III, the program was developed with a pilot group of 100 students, most of whom had experienced academic, behavioral, and attendance problems in elementary school. The rationale for the target population was that success with this group would ensure success with all ninth graders.

In September 1975, WORK-ED was validated as successful, cost effective, and exportable by the standards and guidelines of the United States Office of Education. Its dissemination is funded by the Elementary and Secondary Act. Title IV-C program in New Jersey.

ESSENTIAL ELEMENTS

The program's replication in another site is defined by

1) curriculum implementation in all four Communication courses of study
2) curriculum implementation in at least 5 of the 9 Career courses of study, including Career Guidance,
3) participation in the two training workshops,
4) community involvement, guest speakers, and field trips.

A district may choose to adapt areas of the program rather than adopt the entire program as described above; it thus can utilize the Communication area or the Career area depending on its individual needs and existing programs.

GOAL, EVALUATION DESIGN, AND RESULTS

Goal

Ninth grade students, who have not chosen the traditional college prep high school course, will make career choices based on occupational information and ability to select goals.

The Crites Career Maturity Inventory was administered on a pre and post test basis. Test scores were analyzed by a t-test which showed that the students scored significantly higher on the post test over the pre-test in the areas of *Occupational Information* and *Goal Selection*. Additional evaluation of the program indicates that students find high school more relevant as indicated by: less disruptive behavior, decreased drop-out rate, decrease in vandalism, decreased truancy, decreased absenteeism, and correlation of the student's 10th grade course selection with his/her future career goal.

In a written student survey, 98% of the students stated that their knowledge of careers had increased, 97% indicated that the course was helpful and relevant to them, and 71% stated that they had made tentative career selections as a direct result of the program.

DISSEMINATION SERVICES AND MATERIALS

Project WORK-ED, at Hackettstown High School, has been funded as a demonstration site by ESEA, Title IV-C, to offer educators the opportunity to see the program in operation, talk to students and staff, examine its materials and receive training and follow-up consultation in its replication. The project staff will provide a brief awareness session at teacher training institutes or at sites where 25 or more interested persons are present. This session consists of a film overview of WORK-ED, materials used in the program, and articulation with the project staff. A two-day training session plus follow-up consultation are available to the staffs of districts that make a commitment to replicate the program. Personnel to be trained must include an administrator, guidance counselor and one teacher from each of, at least, five career clusters. There is no charge for the services of the project staff within New Jersey. Consumer districts are responsible for costs incurred by their staffs for training and program installation.

The following materials have been prepared by the project staff and may be purchased at cost. Checks or purchase orders should be made payable to WORK-ED and accompany the order.

WORK-ED – The Changing World of Work A curriculum manual for teachers with student material for duplication. (186 pages)	$7.50
WORK-ED-Curriculum Manual #2 Six additional courses of study	To be determined
WORK-ED Administrator's Manual Administration and coordination responsibilities for the start-up and maintenance of the program. (71 pages)	$5.50
Filmstrip/Tape: Overview of Project WORK-ED	$12.00
Parents' Manual	1.00
Project Description Brochure	Free

COSTS

The cost of replicating the program relates to staff training, materials, and evaluation. The materials developed by the project staff are available at cost and are utilized *in place of* 9th grade curriculum material utilized in the past. After initial start-up investment for staff training and materials, the program's maintenance should not require an increase in a district's operating expenses.

Inquiries about the dissemination services and materials available from Project WORK-ED should be addressed to the project director.

CONTACT PERSON

Virginia A. Fraleigh, Director
Project WORK-ED
Hackettstown High School
Warren Street
Hackettstown, N.J. 07840
(201) 852-2800